

Designing Consumer Involvement Approaches

The impact of involvement to support the creation
and acceptance of food innovations

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Abstract



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This study examines consumer involvement as a part of the food innovation development process. External pressure and increasing competition on the market forces companies to create food innovations that gain consumer acceptance and are approved by the law. Therefore, companies should pay increasing attention to consumer involvement to meet the public’s changing demands. To optimize the benefits of consumer involvement the company should choose an approach in which to collaborate with consumers. The appropriate approach is determined by the degree of innovation in question.

The study explores the subject by answering the research question: “How does consumer involvement support the creation of food innovations and the acceptance of new products” Qualitative research was carried out as semi-structured interviews both with Valio, a Finnish food company, and Foodwest, a consulting firm, that offers consumer research to food companies. The interviews focused on examining different consumer roles and needs of the company to identify possible areas of improvement.

As a result, two different approaches can be suggested to companies in order to support consumer involvement: Consumer-Centered approach and Co-Creation approach. The selection between the approaches depends on whether the innovation is new to the company or new to the market. With the appropriate approach the company can identify consumer’s current and upcoming demands even at the beginning of the process. As the process moves forward, quantitative research methods can be utilized to ensure consumer acceptance of the new product. This supports the product development and reduces risks after the product launch. Based on the results of this study, consumer involvement alone cannot secure consumer acceptance especially if the product is new to the market. Different measures can be taken in order for the company to reduce possible prejudices of the new product. To maximize the benefits of the results, an internal questionnaire is recommended for food companies. With these questions, the company can identify new requirements and possibilities for consumer involvement as a part of their food innovation development process.

Keywords: food innovation, consumer involvement, consumer-centered approach, co-creation approach, innovation process, new product development process

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Tämä opinnäyte tutkii kuluttajien osallistamista osana ruokainnovaatioiden kehitysprosessia. Ulkoiset paineet ja kasvava kilpailu markkinoilla pakottavat yritykset luomaan ruokainnovaatioita, jotka saavat sekä kuluttajien että lainsäädännön hyväksynnän. Siksi yritysten on entistä tärkeämpää huomioida kuluttajien rooli prosessin eri vaiheissa, jotta uudet tuotteet vastaisivat kuluttajien alati muuttuvia tarpeita ja toiveita. Yritysten tulisi valita lähestymistapa kuluttajien osallistamiseen optimaalisen hyödyn saavuttamiseksi. Tarkoituksenmukainen lähestymistapa määräytyy innovaation uutuusarvon mukaan.

Opinnäyte tarkastelee aihetta vastaamalla seuraavaan tutkimuskysymykseen: ”Miten kuluttajien osallistaminen tukee ruokainnovaatioiden kehittämistä ja uusien tuotteiden hyväksymistä?”. Laadullinen tutkimus toteutettiin teemahaastatteluina ruoka-alan yritykselle Valiolle ja asiantuntijayritykselle Foodwestille, joka tarjoaa kuluttajatutkimusta elintarvikealan toimijoille. Haastatteluissa keskityttiin selvittämään kuluttajien eri rooleja ja yritysten tarpeita prosessin aikana mahdollisten kehitystarpeiden tunnistamiseksi.

Työn tuloksena voidaan ehdottaa kuluttajakeskeisen (Consumer-Centered) ja yhteiskehittämisen (Co-Creation) lähestymistapoja kuluttajaosallistamisen tueksi. Lähestymistavan valintaan vaikuttaa se, onko innovaatio uusi yrityksen vai markkinoiden näkökulmasta. Oikean lähestymistavan avulla yritys voi prosessin alussa selvittää kuluttajien nykyisiä ja tulevia tarpeita. Prosessin edetessä voidaan varmistaa kuluttajien hyväksyntä kvantitatiivisten tutkimusmenetelmien avulla. Tämä tukee tuotekehityksen suuntaa ja vähentää riskejä lanseerauksen jälkeen. Tuloksien perusteella voidaan todeta, ettei kuluttajien osallistaminen yksinään riitä varmistamaan hyväksyntää, varsinkaan jos tuote on uusi markkinoille. Eri toimien avulla yritys voi kuitenkin pyrkiä vähentämään mahdollisia ennakkoluuloja liittyen uuteen tuotteeseen. Tuloksien hyödyntämiseksi suositellaan kysymyspatteristoa ruokayrityksien sisäiseen käyttöön. Kysymyksien avulla yritys voi havaita uudet tarpeet ja mahdollisuudet kuluttajien osallistamiselle osana ruokainnovaatioiden kehitysprosessia.

Avainsanat: ruokainnovaatio, kuluttajien osallistaminen, kuluttajakeskeinen lähestymistapa, yhteiskehittämisen lähestymistapa, innovaatioprosessi, tuotekehitys

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List of Abbreviations

NPD	New Product Development
NTTF	New to the firm
NTTM	New to the market
NTTW	New to the world
OECD	The Organization for Economic Co-operation and Development

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1. Introduction

1. Introduction

Food has played a significant role in human evolution because it means more than just surviving and has an impact on our emotional and social life as well (Catterall, 1999; Fox, 2003; McClements, 2019). It describes who we are, represents the time and geographical location we are living in, and defines our values and culture (Fox, 2003). The food we eat is rooted in our culture, and those habits are handed down from one generation to the next. However, consumer demand is changing because of external pressures that are forcing companies to innovate new food products.

Professor Johanna Mäkelä gave a lecture on *Food and identity in Finland* at Aalto University on the 14th of January 2020. She presented the transformation of food culture in Finland. She explained how food innovations are reproductions of traditions that introduce novel features. An example of innovation that is a combination of traditional and novelty is “vegan ham”. The news reported it was replacing traditional ham in Christmas dinners, especially in the southern part of Finland (Salmi, 2018). Even if this example does not reflect mainstream consumption, according to the K-Group’s Food Phenomenon 2019 (K-Group, n.d.) report, conscious consumption will increase in the following years, and people are looking for more ethical and environmentally friendly products.¹

Consumer demands are changing, which increases the challenges companies face in creating products that gain acceptance. Because consumers are the ones who buy and use new products, their needs should be observed. Therefore, consumers should be involved in the innovation process to identify their pain points and ensure that the product will offer solutions for their needs. Service design opportunities have been recognized in many industries in Finland in previous years. Companies are looking for better tools and methods to collaborate with consumers to ensure that the products and services will meet the consumers’ demands. The K-Group’s trend review 2020 (K-Group, n.d.) predicts that new types of food products are going to be designed together with consumers. The review highlights that consumer input should be considered in the product development stage, and different digital platforms are supporting the collaboration.

¹ K-Group’s Food Phenomenon 2019 report results are based on interviews with experts and K-food retailers, and a consumer survey to which 1,069 consumers responded.

The aim of this thesis is to discover different ways of involving consumers to support the creation of food innovations and the acceptance of new products. Even if there are various ways to collaborate with consumers, the company might not know what the most suitable approach for them would be. The thesis is focused on examining innovation from the companies’ point of view in order to determine the right involvement approach for the innovation process. The qualitative research is conducted by using semi-structured interviews to examine how Valio is creating food innovations and collaborating with consumers during the process. An interview was also conducted with a consumer research consultant Foodwest to examine their perspective and expertise on the research subject.

My personal experience and interest in creating food innovations started last year when I co-founded a food-related startup. During that time, our team tried to create innovation that would be new to the market. Through success and failure, I realized how challenging it is to develop new food products that have consumer acceptance. Since I have also worked for a few years as a service designer in the public and private sector, I wanted to utilize my previous experience and knowledge of collaboration with consumers to examine what opportunities and values consumer involvement during the innovation process can offer to food companies.

1.1 Research objectives

This thesis aims to examine the different approaches of consumer involvement to support the process of creating food innovations and discover how that can ensure the acceptance of new products. The study consists of primary and secondary data collection methods that are used to execute the research. Primary data collection includes interviews that are implemented with two chosen companies, Valio and Foodwest.

The research was conducted to answer the following research question:
“How does consumer involvement support the creation of food innovations and the acceptance of new products?”

To answer the research question, literature provides a multidisciplinary view of the research subject whereas qualitative research is focused on discovering the context of Finnish food companies. The interviews are executed with experts of different backgrounds from Valio and Foodwest to gather broad findings.

The first objective of the thesis is to explore the meaning and need for innovations. As research focuses on how companies perceive and benefit from consumer involvement, it is also crucial to understand the degrees of innovation from a company’s point of view. The second objective is to examine how food companies are currently involving consumers in the innovation process and what value it can provide for creating new food products. By identifying the different approaches of involvement, it helps to discover improvement opportunities. The third objective is to comprehend the attributes that affect the acceptance of innovations. By understanding the reasons for acceptance, they can be utilized to ensure success for new products.

This thesis provides insights for food companies about different opportunities for consumer involvement depending on the degree of innovation. The thesis introduces recommendations on how consumers could be integrated into the innovation process to support the success of new products. Implications for designers are also addressed in the thesis.

1.2 The structure of thesis

The structure of the thesis contains six chapters that are in the order of the working flow. Chapter 1, the introduction, explains the reasons for the chosen research topic and introduces the research question and objectives. Chapter 2, the literature review, focuses on determining the classifications and degrees of innovation and examining the reasons for acceptance. This chapter also presents the commonly used innovation process in food companies and represents the different approaches for involving consumers. Chapter 3, the methods and data, describes the applied methods to execute and analyze research. Chapter 4, interview findings, discuss the relevant findings from the conducted interviews with Valio and Foodwest. Chapter 5, the conclusion and discussion, presents the main results by answering the research question. This chapter provides recommendations for companies to identify possibilities and the need for consumer involvement. Chapter 5 also discusses the implications for designers and design agencies. In the end, the chapter introduces the limitations of the study and suggestions for further research.

2.
**Literature
review**

2. Literature Review

This chapter introduces and provides a comprehensive view of research subject using diverse literature from academic research to secondary sources from different publications. The chapter begins by presenting the meaning and classifications of innovations that are used in this study. I chose the categorization of three innovations to define the differences between them by using examples of innovations in the food industry. I also go through the degrees of innovation from a company’s perspective and clarify the attributions that affect the consumer acceptance of new products. I focus on the Organization for Economic Co-operation and Development (OECD, 2005) categorizations as it has presented the innovations from the company’s point of view, which I see useful in the scope of my study. By understanding a commonly used innovation process to create new products in the food industry, it helps me to identify possible improvements and requirements of consumer involvement. Finally, the chapter determines the different approaches to involvement that are introduced by Kaulio (1998).

2.1 Main pillars for innovation

The origin of the word “innovation” is derived from the Greek word *nova* that means new (Leppälä, 2014, p. 89). Leppälä (2014) claims that innovation can be used to describe the producing and emerging of a new phenomenon. Throughout history, companies have been using the word innovation to promote the distinctness of their products and services. However, the innovation does not have to be novel but it should provide a new value for the user. Leppälä (2014) defines that product innovation is a company’s new product, or product family, while the innovation process means the goal-oriented process to discover and produce new products or services.

According to Joe Gerber (IDEO website, n.d.), CoLab Managing Director from IDEO, companies have to focus on three crucial matters in order to achieve a successful business: viability, feasibility, and desirability. Orton (2017) defines that the previous combination of three matters can be called a “trifecta for Innovation” where the innovation is placed in the middle (see Figure 1). She claims that viability, feasibility, and desirability should be tested to make sure that innovation is moving in the right direction. She added that the test results should indicate that the product will be profitable in the future as well. A test for feasibility measures the company’s internal resources and possible limitations to produce the new product, while a test for viability can use to measure long-term financial impact for the company (Orton, 2017). A test of desirability measures how the product is solving real pain points of the consumers’ life (Orton, 2017). However, consumers decide the product’s desirability only after trying the product (McClements, 2019, p. 63). Orton (2017) explains that if a company does not consider all these matters, there is a high risk that the innovation will fail.

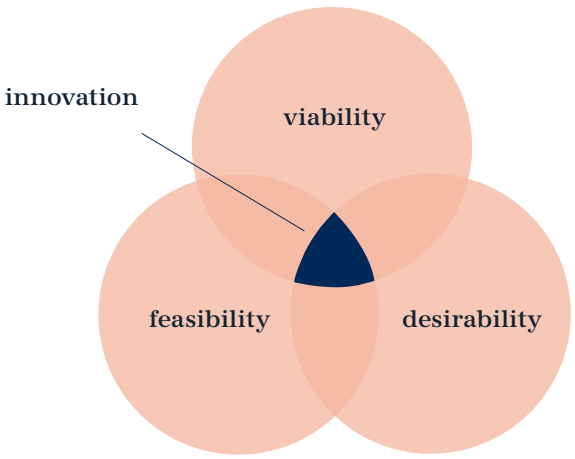


Figure 1. Viability, feasibility, and desirability should be tested to ensure the success of innovation. Adapted from Orton, 2017. Retrieved by <https://medium.com/innovation-sweet-spot/desirability-feasibility-viability-the-sweet-spot-for-innovation-d7946de2183c>

2.2 The need for innovations

Companies are forced to change their way of working because they are facing many external pressures. Tidd and Bessant (2009) demonstrate that general attitudes toward the environment and climate change are changing, and this affects consumer demands. According to the authors, this creates opportunities and even forces companies to create new products that would answer to changing consumer needs. Moreover, they claim that the pressure to produce more environmentally friendly products might be defined by legislation in the future. Competitors on the market are also struggling with the same issues and creating new solutions for consumers that can increase the competition between the other companies and be a threat to their current market position (Tidd & Bessant, 2009). As these factors indicate, companies need product innovations to survive in a changing world and the increasing competition on the market. McClements (2019, pp. 97, 364) argues that because of the external pressures, food companies have to reformulate the familiar food to supply more environmentally friendly options for consumers. He added that because the food industry is producing large amounts of food products all over the world, they have a crucial impact on the environment and changing consumer habits.

2.2.1 The degrees of innovation

There are many classifications of innovation in the literature, but they include some inconsistencies and overlaps. By critically examining the literature, it is clear that innovations are commonly categorized into two or three groups. To be more accurate in the differences between the innovations, I have used the categorization of the three groups in this study. The following classifications are chosen to provide an overlook of innovations. It is essential to understand the different degrees of innovation because they are influencing the market in various ways and require the company to react accordingly. Therefore, the company should manage their processes in a way a specific innovation needs. This subsection introduces examples of the food industry to connect the classifications of innovation to the research subject.

Lee and AbuAli (2011) state that innovations are most commonly categorized into three groups: continuous/incremental (Goel [2017] uses “sustaining”), discontinuous, and disruptive (Berg et al. [2014], and Wall & Winger [2006] use “radical”). For my thesis I will use *incremental*, *discontinuous*, and *radical* as these were most commonly used in my sources. Even if there are differences in the naming of innovations, the meaning of them is similar. Next I will focus on comprising the classifications of incremental, discontinuous, and radical to examine the differences between these terms and to support the comprehension of reading.

When companies make improvements to their existing products, it is called incremental innovation (Berg et al., 2014). Wall and Winger (2006) claim that the majority of the launched innovations in the food industry are incremental innovations. An example of incremental change in a food product is different flavor variations, which can change according to demand and season. The risks in incremental innovation are lower than in discontinuous innovation because the company can use existing technology in an existing marketplace, whereas discontinuous innovation uses a new technology or enters a new marketplace (Berg et al., 2014, p. 15).

Discontinuous innovations can impair the demand for traditional products and services by offering better solutions for current problems. These innovations require risk tolerance from the company because they might not have the needed technology or the previous experience needed for production (Berg et al., 2014, p. 15). Wall and Winger (2006) define that the key factor in identifying opportunities for discontinuous innovations is to understand the company’s own limitations and opportunities for innovation as well as creative thinking. Gallen, Pantin-Sohier, and Peyrat-Guillard (2018) introduce insects as an example of discontinuous innovation in human food, especially in Western culture, where insects have not been perceived suitable for human consumption for long. They explain that in France, the consumption of insects is still considered to be experimental, and it challenges people’s expectations and behavior.

When a company achieves research breakthroughs by developing an innovation that will use new technology and focus on a new market that the company has not explored yet, it can be called a radical innovation (Berg et al., 2014). Radical innovations can significantly change our way of living. The mobile phone can be used as an example of radical innovation (Berg et al., 2014). It replaced the landline phone and changed the whole experience of communication because it allowed people to move and travel outside the home while taking a call. After 20 years of replacing the landline phone, young children in Finland do not know how to use landline phones or have not even seen one. Traitler, Coleman, and Hofmann (2014) claim that in the food industry, it is much trickier to find examples of radical innovations. However, the following example introduces a radical innovation of technology in food production. The *Finnish Medical Journal* article “Raw milk is a dangerous food” (Rahiala et al., 2018) introduces the history of and the reasons for pasteurization. According to the article the idea was invented in 1866 by Louis Pasteur, who discovered how short-term heating can extend the shelf life of wine. Nowadays, the method has been used to terminate pathogenic bacteria, prolong shelf life, and it has made our food safer to eat (Rahiala et al., 2018). Technological innovations have had a major impact on our food system, our ability to produce and store food efficiently, and replaced other methods in the food industry over time. Innovation can be also radical without changing our lives as dramatically as the previous examples introduced. Kuzminov et al. (2018) have mapped radical food innovations by using a text mining approach to identify food-related documents from various sources and “cultured meat” has been pointed out as one example. Cultured meat, which is also known as *clean meat*, is made by growing animal cells in bioreactor tanks (Bunge, 2017). Many alternative protein options can also be called radical if the technology is new and the product is focusing on new market areas that the company has not explored yet, even if the innovation does not replace current mainstream products.

Olsen (2015) claims that in the food industry, a conventional approach to creating a food innovation is based on the technical development, possibilities of machinery, or uses of underutilized ingredients (or part of them), rather than searching what the consumers’ needs are. However, large companies might not be able to develop new products as agile as startups because they have a slower process to implement new products from ideas to launch. For example, Valio’s principal scientist Päivi Myllärinen told in Radio Suomen Päivä interview (Östman & Mylläri, 2018) that

the developing process of a new food product takes 1-2 years, and more depending on acquisition of machinery, which can take in itself about one year. Therefore, the innovation process begins by analyzing the possibilities of existing machinery (Östman & Mylläri, 2018).

Established companies might ignore the potential of radical innovations because they already have existing technologies and a place in the current market. There is a higher risk of developing radical innovations, but the potential for entering a new market should be recognized because of changes in consumers’ demands (Tidd & Bessant, 2009). Radical innovation has been described as risky, costly, and producing novelty for the world (Traitler, Coleman, & Hofmann, 2014; Tidd & Bessant, 2009). The need for radical innovations can appear from small groups of people whose needs are not solved yet, but companies might not notice these signals because the group does not represent the mainstream (Tidd & Bessant, 2009). Therefore, novelty innovations might attract a small group of consumers before becoming the norm (Lee & AbuAli, 2011; Leppälä, 2014). Wall and Winger (2006) argue that radical innovation will not cover current problems but anticipate the future needs of consumers. They add that data for current consumption does not provide the needed information to develop radical innovation.

2.2.2 Innovations from a company perspective

All the previous classifications of innovation are observed from a market point of view, but if one considers the degree of novelty from a company perspective, three categories can be used to arrange the innovations. The OECD (2005) introduces the three categories that are “new to the firm”, “new to the market”, and “new to the world” (pp. 57-58). The “new to the firm” (NTTF) definition can be used when the ingredients or methods of innovation are new from a company’s point of view, but competitors might have similar innovations on the market (OECD, 2005). For example, if a company is used to operate in the meat industry and wants to start to create alternative plant-based protein options, the company might not have the required knowledge of ingredients, machinery to produce the product, or the necessary consumer insight. Therefore, the company can benefit from external information to develop new products (OECD, 2005). If there are similar products

on the market, consumers might have previous experiences of the taste and use of the product, and that would provide valuable external information for the company.

The OECD (2005) explains that the “new to the market” (NTTM) definition can be used when the company is the first one to introduce an innovation to a market based on a geographic region or a specific product category. The “new to the world” (NTTW) definition can be used when the company is the first one to launch a product for all markets internationally (OECD, 2005), and the company and consumers have no previous experiences of a similar product. Because nowadays companies are able to operate globally more easily, their market area can be more extensive. Therefore, NTTM and NTTW innovations represent novelty equally from the company’s and consumers’ point of view, because it is hard to verify with certainty whether there are similar food products or innovations elsewhere in the world. As a result, this study is focusing on NTTF and NTTM innovations.

2.2.3 A matrix of innovations

The matrix is used to visually present the innovations mentioned above, by placing them in a chart based on their novelty from the company’s perspective, as indicated in Figure 2. The visualization for the matrix has been adapted from the Innovation Ambition Matrix presented by Nagji and Tuff (2012). However, I have created the following version of the matrix by using the references above to support the study.

The vertical axis indicates the degrees of innovation from the company’s point of view when the horizontal axis refers to how new it is for the market. The middle axis represents the increasing risks related to innovations.

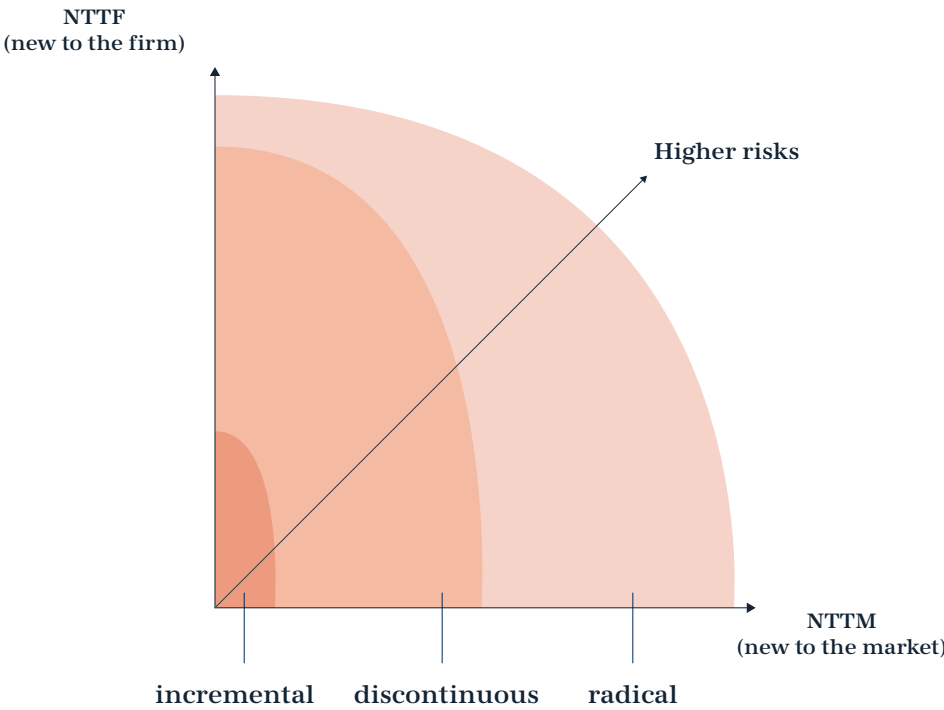


Figure 2. The matrix of innovations represents the degree of incremental, discontinuous and radical innovations from the company and the market point of view. Adapted from Berg et al., 2014; Traitler, Coleman, & Hofmann, 2014; Lee & AbuAli, 2011; Nagji & Tuff, 2012; OECD, 2005; Tidd & Bessant, 2009.

2.2.4 Acceptance of novelty food

To make sure if the product is desirable, it would be crucial to understand what consumers need and want. Considering more radical innovations, that might affect our life more than expected, consumers might not even know how their needs would change. Churchill, Von Hippel, and Sonnack (2009, p. 74) claim that “need” has different meanings depending on whether we are talking about basic needs or desire for products or services. Both meanings can be seen linked to the acceptance of the product. We need food to survive and therefore we need to consume products but without acceptance, consumers do not desire new food products.

People make a purchase decision in a couple of seconds in grocery stores (Milosavljevic, Koch, & Rangel, 2011), and therefore the first impression can be seen as a key factor that is influencing the consumer decisions (McClements, 2019). When we have the first contact with novelty food, we might have lots of suspicions related to the safety, taste, and affordability of the food (McClements, 2019; Traitler, Coleman, & Hofmann, 2014). The food industry faces many other challenges than the other industries are facing when developing innovations, for example, food neophobia, which is a fear of new food (Guiné, Ramalhosa, & Valente, 2016; McClements, 2019). Another challenge is disgust, which can cause adverse reactions with certain foods (McClements, 2019). Food neophobia and disgust might look the same to outsiders, but the difference appears when people with food neophobia fear trying new things, while disgust can come out with familiar foods when the texture, smell, or other features cause the reaction of disgust (McClements, 2019).

It will be easier for consumers to replace familiar ingredients with new product innovations when they are mimicking existing food products (McClements, 2019; Gallen, Pantin-Sohier, & Peyrat-Guillard, 2018). For example, many plant-based products are mimicking meat products, and that is why they are suitable for omnivores who have a balanced diet but want to change their eating habits to a more ethical and sustainable direction. McClements (2019) claims that even if we want to follow a more sustainable lifestyle, the flavor is still ranked as the most critical attribute that impacts our eating choices. However, he adds that the experience of flavor might change when people receive information about other attributes of the product. For example, when people know that food has ethical or environmental benefits, the taste of it might improve (McClements, 2019). Therefore, clear communication and marketing are crucial because people also consume based on their values. The products should meet consumers' needs as well as fit their lifestyle (Guiné, Ramalhosa, & Valente, 2016). Companies should be aware that different beliefs drive our food choices, whether they are real or not. Indra Nooyi (Nooyi, 2015) suggests that if consumers have suspicions of some ingredients, companies should create the products without questioning the truth behind it.

Human perceptions, which can be measured by sensory evaluation and psychological responses like the reaction of the product, are affecting the acceptance of food (Guiné et al., 2012). As a consequence, consumers should be involved during the innovation process to ensure and measure the acceptance of the product.

2.3 New product development process

Companies have created their own internal processes to develop new products that lead to common practices in the whole organization during the innovation process (Berg et al., 2014). Beckley, Herzog, and Foley (2017, p. 72) define that the typical product innovation process that food companies are following is New Product Development (NPD) process, where the goal is to commercialize the new product ideas (see Figure 3). NPD process can be divided from three to 13 different phases (Tidd & Bessant, 2009), but the most critical phases are *fuzzy front-end*, *product development*, and *commercialization* (Berg et al., 2014; Beckley, Herzog, & Foley, 2017; Jou & Yuan, 2016). Even if the NPD process is visualized linearly, the process does not usually move forward without iterations cycles.

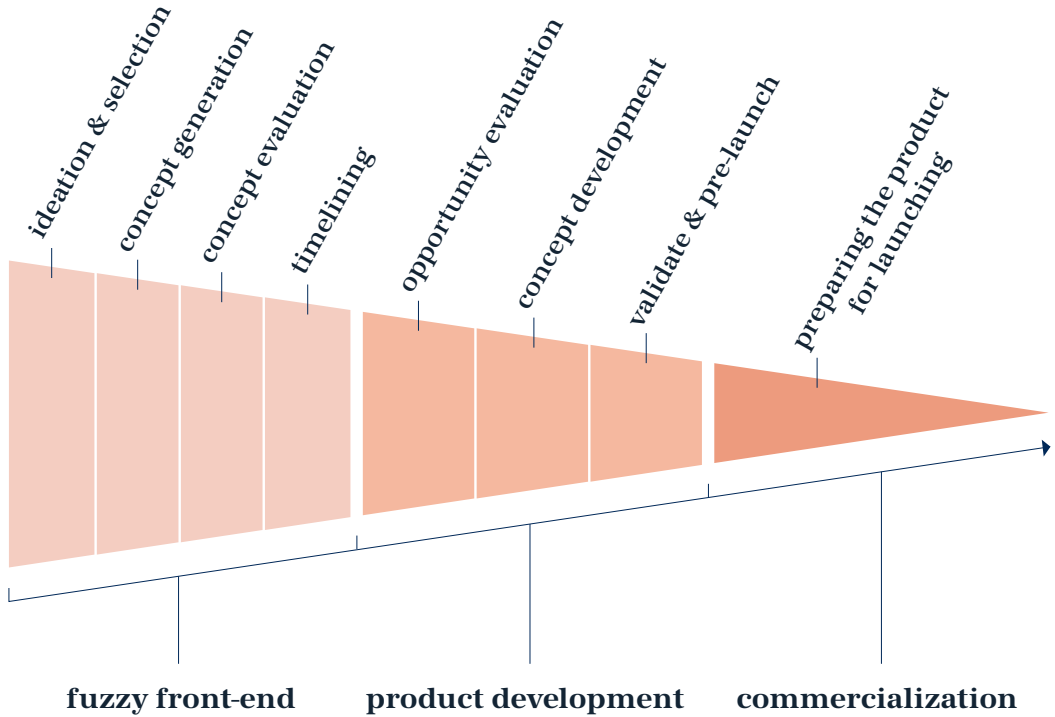


Figure 3. Each stage of the new product development (NPD) process goes through a validation process where the concept and the product become more tangible. Adapted from Beckley, Herzog, & Foley, 2017; Jou & Yuan, 2016.

The fuzzy front-end is an early phase of the NPD process to generate new ideas and see potential innovations based on the gathered information about technology opportunities and consumer insight (Berg et al., 2014; Filieri, 2013; Beckley, Herzog, & Foley, 2017; Tidd & Bessant, 2009). The name “fuzzy front-end” symbolized how at first there can be a limitless amount of influence factors (Traitle, Coleman, & Hofmann, 2014 p. 281) and how the phase might have a lack of structure and order (Tidd & Bessant, 2009). Jou and Yuan (2016) highlight the importance of the fuzzy front-end as an essential part of successful product development and launch. They suggest dividing the fuzzy front-end phase into four different stages. The first stage is the identification and selection of opportunities by exploring market and technology possibilities. The second stage is concept generation by scoping new business opportunities. The third stage is concept evaluation by maximizing the value of the project within the limits of resources. The final stage is timelining the previous three stages to complete the fuzzy front-end phase (pp. 3-8). Because incremental innovation has fewer risks to success, the potential for commercialization can be seen, usually already in the front-end phase (Berg et al., 2014).

Whereas the fuzzy front-end phase might be unpredictable, the product development phase is more structured and follows the specific stages (Hassi et al., 2009). Product development is the phase where all activities should support the development of the idea into commercialization (Tidd & Bessant, 2009). When the most potential ideas are selected from the fuzzy front-end phase, the company can start to develop the concept and the product, and it might need multiple rounds of consumer testing and research until the product is ready for launching (Beckley, Herzog, & Foley, 2017; Tidd & Bessant, 2009). Beckley, Herzog, and Foley (2017, p. 84) have identified the three major stages that can be placed into the product development process: 1) Opportunity Evaluation, 2) Concept Development, 3) Validate and Pre-Launch. In the first stage, it is time to evaluate the opportunities of innovation and what is needed to validate the right solution. During the next stage, prototypes and consumer testing are used to prove the concept and business reality and to make sure that consumers want the product. In the third stage, it is time to confirm that the product will be worth investing and ready to scale-up for the launch (Beckley, Herzog, & Foley, 2017).

The commercialization phase in the NPD process prepares the product for launching (Beckley, Herzog, & Foley, 2017). Even if the sales numbers can measure the success of the product, the consumer feedback after the product launch should be requested to guarantee long-term success and to foresee other market opportunities (p. 85).

During the fuzzy front-end and product development phases, each stage goes through a validation process, that can be called funnel process or state gate process, where the most potential ideas based on the business point of view, technology possibilities and consumer insight are filtered from all ideas (Berg et al., 2014; Beckley, Herzog, & Foley, 2017; Kallio, 2015; Leppälä, 2014). Only the most potential ideas get through the funnel process for further development. Overall, the NPD process needs flexibility (Pienaar, Lingen, & Preis, 2019), especially when creating radical innovation because the process might take many iterative cycles without moving linearly (Berg et al., 2014). Therefore, different tools and skills are needed to tackle the possible problems during the NPD process (Hassi et al., 2009).

2.4 Consumer involvement in the innovation process

In this study, the used term “consumer involvement” indicates all kinds of research and interaction between consumers and the company during the innovation process. In this section, consumer involvement is presented as part of the source of insight, and I also go through the different roles consumers might have during the development phase. The next section introduces three consumer involvement approaches which are presented in more detail using examples.

Because the food industry is highly dependent on consumer acceptance, consumers should be involved during the innovation process to minimize the risks of failure (Guiné et al., 2012; Guiné, Ramalhosa, & Valente, 2016; Pienaar, Lingen, & Preis, 2019). Consumers as a source of innovation have been noticed and used for decades in the marketing research and development process (Filieri, 2013; Busse & Siebert, 2017; Gasparini & Chasanidou, 2016). However, the novelty of the innovation

defines previous consumer experiences related to the product. Therefore, von Hippel (1986) discloses that usually consumers can provide relevant insight only when having previous experience of existing products. Which is why, when creating a novelty product for the market, the data that typical users can provide is limited (von Hippel, 1986). However, it is much more difficult to predict how consumers will react to a product when creating a radical innovation, and this is why it is crucial to involve consumers in the innovation process (Berg et al., 2014; Guiné, Ramalhosa, & Valente, 2016; Filieri, 2013).

Berg et al. (2014) claim that when the innovation process is moving forward through iteration cycles, it can decrease the risks of developing radical innovations. Test and development with consumers during the innovation process can ensure the right direction of the development. With "fail fast, fail cheaply" -ideology, the company can prevent more significant failures at an early stage of the NPD process, but this requires the courage of a company to involve consumers at a very early stage (p.78). However, each company has to choose their own way of collaborating with consumers based on their current situation, goals, and capabilities and therefore the company should internally discuss how consumer involvement can be utilized (Berg et al., 2014).

Lettl (2007) defines that manufacturing companies that involve consumers as the role of inventors and co-developers benefit most of the involvement if companies are utilizing the consumers' ideas. He argues that consumer involvement has a beneficial impact on the development process and supports the acceptance of radical innovations. He adds that involvement improves the company's decision making for choosing the right prototypes and priorities for further development. However, for beneficial involvement, companies should identify the characteristics of productive consumers (p. 60).

2.4.1 Characteristics of the needed consumers

The role of the consumer in the innovation process can be anything from giving feedback to an active player. However, the type of consumer and the degree of innovation are defining what the company can achieve from involvement. Von Hippel (1986) presents that when creating novelty innovation, the data that typical users can provide is limited, because their insight is constrained by previous experiences. However, lead users have been seen as a vital source of useful data in the NPD process (von Hippel, 1988). Eric von Hippel (1986) describes that lead users are persons who have faced problems even years before others, and their needs will become common among other consumers in the future. The lead user can be a person or a company that is facing a problem and is trying to solve it by themselves (von Hippel, 1986). Therefore, they can be used as a data source for need-forecasting during the NPD process because they have frequently attempted to fill their need when facing a problem (von Hippel, 1986). Churchill, Von Hippel, and Sonnack (2009) describe the following example of the lead user in the home kitchen. When microwaves came, it changed the meal preparation. However, a typical user who would be inexperienced using a microwave might not imagine all the uses possibilities that the microwave could offer. Certain parents, who could be identified as lead users, started to create their microwave snacks for children, that they could heat the snack safely by themselves without using an oven or stove. The food industry noticed the potential of this product and started to produce and sell microwave snacks (p. 8).

Because in the literature lead users are usually identified as pioneers and experts in the field of their interest and are usually solving more complex and technical problems than food, it is harder to identify food-related lead users. Von Hippel (1986) suggests that related to consumer goods, lead users can be identified with well-designed surveys in a chosen trend. According to von Hippel (1986) this can be done with well-designed questions to see how much participants appreciate and give value to the improvements related to the topic. He adds that surveys can also be used to recognize users who have possibly created their own solutions for the problem. Lead users are active innovators who are not afraid of failure and whose ideas can provide new market opportunities for companies (Tidd & Bessant, 2009).

2.5 Consumer involvement approaches

Pleshko and Al-Houti (2012) explain that typical users can be divided into two different groups: heavy users and light users. Heavy users are those who purchase more and therefore have more experience of the product than light users (Pleshko & Al-Houti, 2012). Heavy users are also interested in seeking more information and learning about the new products they are consuming (Ruangthammakit & Wongsurawat, 2018). Brem, Bilgram, and Gutstein (2018) claims that lead users can be identified from heavy users in online communities where they share information by analyzing the content and observing their role in the community. Even if the typical users cannot provide useful information without having previous experiences, they can offer insight when the company is creating innovation that is only new for the company itself.

In addition to lead users, inventive users are also mentioned in the literature to be useful in the innovation process. Lettl (2007) defines that inventive users are motivated to solve problems and find new solutions, but they differ from lead users because their problems are representing the current mainstream. Therefore, inventive users can provide creative outcomes for current problems. As a result, different types of consumers are useful for the NPD process, but the degree of innovation dictates what type of consumers should be involved in the process (see Figure 4).

Types of consumer	Potential benefits of collaboration when creating innovation
Light user	They can provide useful insight related to their previous experiences with similar products when creating innovation that is new to the company.
Heavy user	They are constantly searching for information related to the products they consume. Therefore heavy users have a great amount of knowledge about existing products.
Inventive user	They can provide a useful external resource to solve the coming problems when creating the innovation that is new to the company.
Lead user	They can provide need-forecasting that might reflect mainstream consumption in the future.

Figure 4. The different types of consumers might impact the innovation process in different ways.

Kaulio (1998, pp. 141-143) introduces different types of consumer involvement during the product development process. It can be divided into three categories: 1) *Design for consumer*, 2) *Design with consumer*, and 3) *Design by consumer* (see Figure 5).

Design for approach denotes that the product is designed for the consumer without involving them in the actual design process. The data has been collected from consumers by using interviews and market research. The company might already have consumer data from previous research, and it can be used for other product development as well.

Design with approach denotes that the consumer has a role in the development process by giving comments and feedback on the proposed concept and design solutions.

Design by approach denotes that the consumer has an active role in the product development process from start to finish and takes a part in designing solutions for their real-life problems.



Figure 5. Three different approaches to consumer involvement in the product development process. The company has an active role in the “Design for” approach while the consumers have an active role in the “Design by” approach. Adapted from Kaulio, 1998.

The consumer’s role is starting to be more active, which has a positive influence on the innovation process (Prud’homme van Reine, 2017). The most frequent stage for consumer involvement during the NPD process is at the beginning of the concept development stage and at the part of conceptual design and prototyping (Kaulio, 1998). As Kaulio (1998) introduces, consumers can be involved in different ways in the process. The following subsections are presenting the examples of the literature on what approaches and methods companies have utilized for consumer involvement.

2.5.1 Design for approach

Horvat et al. (2019) examine that “design for” and “design with” are the most common approaches to involve consumers in large European food companies to obtain data. In the “design for” approach, companies are using qualitative research methods, such as focus groups and surveys, to analyze consumers’ needs and preferences. However, they argue that when using only a “design for” approach, the company has less control to ensure the success of the novel product (pp. 26, 28).

Indra Nooyi (Nooyi, 2015), who is the former CEO of PepsiCo, gave an example of why companies should listen to their consumers. PepsiCo used focus groups to learn what consumers think about their existing SunChips product. From the focus group they got insight that the product was too large for bite-size, and based on that, Indra Nooyj decided that they are not going to sell a product that is produced based on existing manufacturing capabilities. Because consumers did not love the product, they chose other brands instead of SunChips. Therefore, companies should listen to consumers and offer products that consumers want to eat (Nooyi, 2015). The previous example regards the benefit of focus groups. However, sometimes companies blindly follow all the consumers’ wishes without questioning anything, and that might lead to failure (Traitler, Coleman, & Hofmann, 2014). Especially when creating new product innovations, consumers are not able to express desires and needs that do not yet exist (Traitler, Coleman, & Hofmann, 2014). Companies should comprehend that consumers are only assisting to identify problems and opportunities, not providing a final solution (Busse & Siebert, 2017). As a result, the “Design for” approach is suitable when developing innovations that already exist on the market because typical consumers can provide valuable data related to their previous experiences with similar products.

2.5.2 Design with approach

In the “design with” approach, consumers take part in the tests that are required in the product development phase, such as concept and sensory testing (Horvat et al., 2019). Busse and Siebert (2017) define that based on scientific literature analysis, the most common way to involve consumers in the innovation process is the “manufacturer-active” role where the company controls the whole innovation process. The reason behind this can be that when developing innovation, there might be confidential information that the company is not willing to share (Busse & Siebert, 2017).

Consumers can be a part of the innovation process already when the company desires to test the concept ideas before prototyping. Guiné et al. (2012) examined the commercial potential of a new product idea, which consists of two familiar ingredients for Portuguese people; whey cheese and pumpkin jam. They implemented a sensorial evaluation for 17 untrained participants to test the product, and a questionnaire for 100 participants to analyze the market potential and possible acceptance of the product. The research team did not receive encouraging results because they noticed that almost half of the participants are not consuming these ingredients regularly (Guiné et al., 2012). This study discloses potential risks when consumers are not involved because otherwise, the company’s assumption might mislead product development, which increases the risk of investments. Even if consumers like the taste of the product in the test, it is not guaranteed that they will buy it. In the “design with” approach, consumers can provide improvement ideas of the concept or taste of the product. However, this approach has limitations on how much consumers can influence the development process because the methods only are used to gather insight and feedback.

2.5.3 Design by approach

In the “design by” approach, consumers are actively involved during the innovation process and have the role of innovator and co-creator (Horvat et al., 2019). Horvat et al. (2019) define a significant link between this approach and NTTW innovation to support the product’s success. However, they examine that consumers are not frequently involved as an active role in NPD, which might reflect the fact that NTTW innovations are not created often.

Filieri (2013) introduces a case study of a large Italian food company, which involved and gathered ideas from consumers during the fuzzy front-end phase by using an internet-based platform. The company launched a co-creation platform, which allowed the consumers to share their concept and product ideas. Participants in the platform interacted with each other by leaving comments and voting for the ideas they liked most. Filieri (2013, p. 46) is calling this type of collaboration as “a peer-to-peer informal interaction” and the achieved success can be measured by the number of ideas that have been submitted and voted by participants and implemented by the company. Because participants also had the opportunity to evaluate each other’s ideas by leaving a comment and voting for their favorite ones, it provided insights for the company about the acceptance of the products. The co-creation platform is a cost-effective tool to invite many consumers to co-create together, and it offers an opportunity for users to participate during the whole innovation process (pp. 46, 51). Filieri (2013) explains that when the company provides more decision-making power to consumers, that could lead to new concept ideas during the fuzzy front-end phase. Kaulio (1998) defines that consumers are engaged in the process when they are designing solutions for their own problems.

Different co-creation tools can be used to support consumer involvement during the NPD process. Busse and Siebert (2017) define that online platforms offer continuous interaction through the whole innovation process and the level of interaction is usually high. They argue that usually the platforms are provided by companies, but consumers have an active role during the process.

3. Data and methods

3. Data and methods

Muratovski (2015) defines that qualitative research methods are used when the situation is unfamiliar, and the goal is to understand the complexity of the research problem. He explains that qualitative research helps to gain a more in-depth understanding of the specific situation and clarify the assumptions that are already created of the matter. In this study, qualitative research was used to examine how two companies, Valio and Foodwest, perceive the importance of consumer involvement in their innovation process, and how it can support consumer acceptance of their new products.

In this study, I have gathered data using primary and secondary sources to investigate my research problem. Primary sources refer to the first-hand information that the researcher has created during their own research (Muratovski, 2015). In this study, I am using interviews as my primary source. Secondary sources are second-hand information that other researchers have written, for example, articles, books, reports, and other publications that are using primary courses (Muratovski, 2015). The secondary sources in this study are gathered from essential literature sources to gain a holistic view of the research subject.

3.1 Ethnographic research

Ethnographic research studies human groups, and how they behave, feel, and believe in a particular situation (Muratovski, 2015). In this study interviews are used as an ethnographic research method to gather insight from interviewees’ experiences and beliefs of the research subject. The benefit of ethnographic research is to gain deep insight that cannot be collected in any other way (Muratovski, 2015). Ethnographic research is learning from people in their natural environment, and therefore the ideal situation is when the researcher can be a “stranger” to have a neutral perspective to observe the situation (Muratovski, 2015). Because I am not working at Valio or at Foodwest, I can take on the role of the “stranger” in the research situation, which allows me to examine the subject impartially without letting anything affect the objectivity of the research results. This is why I selected ethnographic research as my qualitative method for this study.

3.2 Interviews

An interview is a qualitative research method that provides such information and insights that can only be gathered from participants’ own experiences and viewpoints (Turner, 2010). Muratowski (2015) defines that semi-structured interviews guide the participant to answer more widely than just “yes” or “no”. He adds that the semi-structured interview follows the chosen themes but leaves more space for follow-up questions to cover the subject more in-depth. Therefore, I decided to do semi-structured interviews, with open-ended questions. The goal of the interviews was to discover how consumers are involved during the process from the company’s point of view when creating innovations of different degrees.

3.2.1 Criteria for selecting companies and interviewees

At first, to get a holistic view of food companies and their innovations in Finland, I decided to categorize different companies’ significant food innovations from recent years based on the degree of novelty. I searched the data from internet pages that introduced the newest Finnish food innovations. The list that I created, consisted of data from fifteen food companies in Finland. I chose Valio from this list because they have launched many innovations in recent years. I decided to focus on their NTTF and NTTM innovations to identify possible differences between them in relation to consumer involvement.

Valio has a long history in the food industry, and they have launched multiple different patented innovations domestically and globally. The company was founded in 1905 by Finnish dairy farmers, who still own the company (Valio website, n.d.). Valio introduces on their website that they have many technological innovations for producing and utilizing milk and plant-based ingredients. The innovations are patented and licensed around the world (Valio website, n.d.). In this study, I will not mention the names of Valio’s brands that are named in the interviews because of Valio’s request. However, the study introduces Valio’s brands according to their NTTF and NTTM classifications. Figure 6 defines how Valio’s NTTF and NTTM innovations can be placed on the presented matrix of innovations.

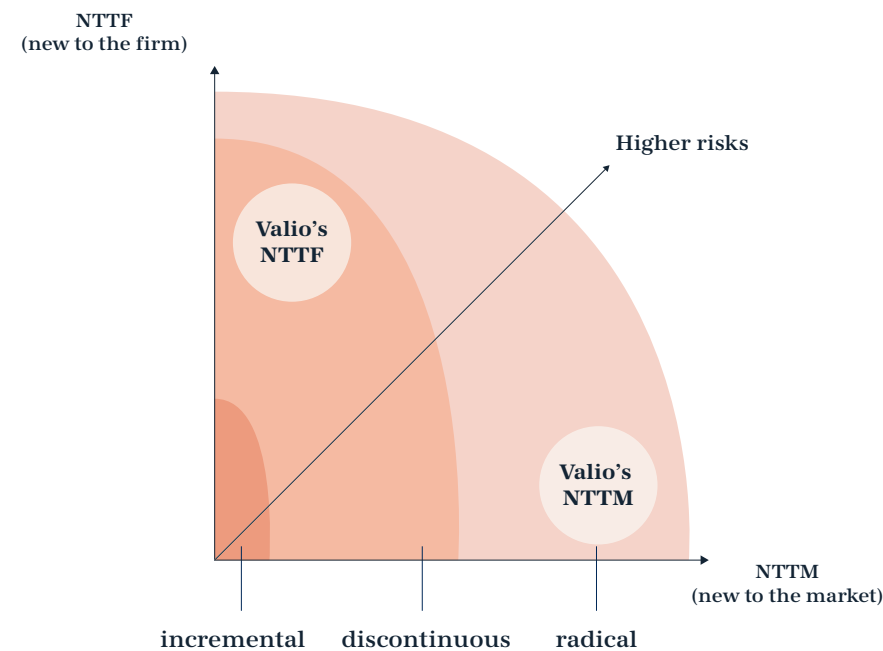


Figure 6. Valio's NTTF & NTTM innovations in the matrix of innovations. Valio's NTTF innovation was new from the company's perspective while Valio has used new technology and focused on the new market area with NTTM innovation.

To achieve valuable insight, the most suited participants should be chosen for the interviews. I had a meeting with my contact person at Valio to discuss who would be the best suited persons for the interviews. The participants were chosen by their role in the NTTF and NTTM innovation processes or by having a holistic overview of Valio's innovation processes.

During my first meeting with Valio, it became clear that it is common to outsource consumer research. Therefore, I decided to also interview Foodwest to get different perspectives and relevant knowledge to my research subject. Foodwest is a Finnish consulting firm that has collaborated with Valio and other food companies to create successful food products. They offer many services for food companies but in the interview, I am focusing on their consumer research services. In their website, Foodwest advertises that they tailor consumer research based on the client and project needs, and they offer a wide variety of qualitative and quantitative methods to gather consumer insight (Foodwest website, n.d.).

3.2.2 Interview plan

Interviews were planned by using Muratovski's (2015, p. 62) guideline of five steps: make preliminary preparations, plan for the interview process, prepare the interview questions, plan for the documentation process and reflect the gathered information. First, preliminary research was done by exploring the companies' pages and searching related information on the Internet. Before the interviews, I examined the essential literature to achieve a more comprehensive understanding of the research subject. Without having a good understanding of the subject, there is a risk that essential aspects, which would be necessary to investigate, are not covered during an interview (Hirsjärvi & Hurme, 2011). I asked to get administrative documents from Valio to support my knowledge of their internal innovation process to help prepare useful interview questions. Next, I decided on the duration of each interview and suggested the timeframe for the companies. Interviews with Valio were decided to be arranged face-to-face in their headquarters with six different persons individually. The interview with two of Foodwest's experts was decided to be arranged via Skype because of location distance.

The interview questions should provide findings to help to answer the research question: "How does consumer involvement support the creation of food innovations and the acceptance of new products?" The research question was used as a guideline to decide the themes of the interview and to gain relevant insight into the subject. It was crucial to understand limitations the participants might have in order to realize what information is possible to gather from the interviewees who had different perspectives of the subject matter. Since the aim was to interview employees based on their role in the innovation process or experience of implementing consumer research, three interview templates needed to be developed. Two of the interview templates I developed for interviews with Valio and one with Foodwest. The first interview template was for persons who have worked in the NTTF or NTTM processes, and the second interview template was for more general information about the internal innovation process at Valio. The third template I developed for Foodwest to examine a more comprehensive view of consumer research in food companies. Even if the themes and structure of all the interviews followed mainly the same principle, the questions were designed depending on the researching subject. Figure 7 shows an overview of the themes of the interviews.

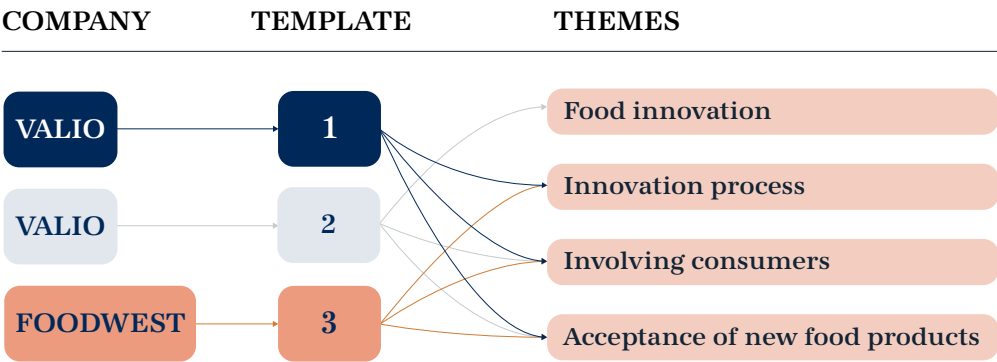


Figure 7. Themes for interview templates with Valio and Foodwest.

Even if questions provide a plan for the interview, the conversation might lead to a different direction. All the interviews were decided to be recorded. As Muratowski (2015) points out, this helps to keep all of the attention in the conversation and to be as flexible as possible with the questions. Taking notes while having an interview might also break the flow of the conversation.

After the interviews were arranged with the companies, I made a timetable for the interviews and made a list of details that needed to be remembered (see Figure 8).

INTERVIEW PLAN (VALIO)		
The address where the interviews will be conducted	Valio Oy, Meijerintie 6, 00370 Helsinki	
Method	Semi-structured face-to-face interviews	
List of the interviewees & Timetable		Interview templates
Senior Vice President of Product Development	Interviewee 1.	Template 2
Business Manager 1.	Interviewee 2.	Template 1
Business Manager 2.	Interviewee 3.	Template 1
Category Manager	Interviewee 4.	Template 1
Head of Consumer Insight	Interviewee 5.	Template 2
Senior Research Scientist from the Research and Development department	Interviewee 6.	Template 1 & 2
Timetable	Interviewee 1. at 10-11, 13th of February Interviewee 2. at 12-13, 13th of February Interviewee 3. at 9-10, 14th of February Interviewee 4. at 10-11, 14th of February Interviewee 5. at 9-10, 20th of February Interviewee 6. at 10-11, 20th of February	
Pilot interview		
The interviewee	A role of process developer and project manager in food industry.	
Timetable	25th of January, 2020	
Preparation		
Pieces of equipment for interviews	Digital recorder, that has been tested in pilot interview. Extra batteries for recorder. Smartphone's recorder as a backup.	
Interview questions	Appendix 1	

INTERVIEW PLAN (FOODWEST)		
Method	Semi-structured interview via Skype	
List of the interviewees & Timetable		Interview template
The Research Director from Consumer Insight and Market Research	Interviewee 1.	Template 3
The Market Research Manager	Interviewee 2.	Template 3
Timetable	Interviewee 1. & 2. at 9-10, 7th of February	
Preparation		
Pieces of equipment for interviews	Digital recorder, that has been tested in pilot interview. Extra batteries for recorder. Smartphone's recorder as a backup.	
Interview questions	Appendix 1	

Figure 8. The plans for interviews with Valio and Foodwest.

3.2.3 Pilot interview

After preparation, the qualitative interview needed to be pilot tested. It is crucial to choose participants for the pilot test who have similar knowledge or experience than those who will participate in an interview to be conducted (Turner, 2010). Turner (2010) defines that the idea of the pilot interview is to test the structure and length of the interview. He adds that if some questions are seen as confusing and hard to answer during the pilot test, it is possible to change the questions before the actual interview.

The pilot interview was executed a few weeks before the actual interviews, with a person who has been working as a process developer and project manager in the food industry. The pilot interview confirmed that the planned time for the duration was enough for follow-up questions as well. The questions covered in the pilot test were developed for Valio but were modified in order for the participant to answer them based on his own experiences while working in food companies. The pilot interview confirmed that the chosen themes were in a logical order to keep the flow of the conversation natural. However, a couple of questions were not clear for the participant to answer. Therefore, the questions were refined after the pilot test.

3.2.4 Conducted interviews

The themes that were discussed during the conducted interviews were food innovation, innovation process, involving consumers, and acceptance of new food products. All the interview templates can be found in Appendices (see Appendix 1).

At first, I had a chance to interview two experts from Foodwest. The interview was organized in week 6 via Skype. The idea was to get an overview of the current situation about consumer research in food companies before getting more in-depth information about Valio’s internal processes. The first four interviews with Valio were conducted in week 7. As planned, I started instantly after the first interviews to transcribe and analyze the findings to identify if any aspect needed more clarification. Because the final two interviews with Valio were conducted in week 8, I had an opportunity to focus on the questions that required more attention. In the last interview I was able to ask for confirmation of my gathered findings from the interviewee.

All the interviews started with a warm-up question about interviewee’ background information and role in the company. Then we went through the main themes. Each theme includes main questions that I tried to keep simple and clear. In addition to the main questions, there were additional questions in case the interview did not disclose the needed information. The follow-up questions were also asked depending on previous answers if I wanted to explore the subject more. During the interview, the order of questions was decided to be changed when it was necessary to keep the interview flow as smooth as possible. However, all the themes and questions were explored.

3.2.5 Analyzing method

The interviews were analyzed using the thematic analysis process to identify recurrent themes within the collected data (Maguire & Delahunt, 2017; Braun & Clarke, 2006). The goal was to recognize those themes that are relevant for answering the research question. Braun and Clarke (2006) define two ways to approach the collected data. The first is a top-down approach where the research question is driving the analysis, and the second is a bottom-up, which is a data-driven approach that is not led with a specific research question (Braun & Clarke, 2006).

The analysis of the conducted qualitative research follows Braun and Clarke’s (2006) suggested six-phase guide for thematic analysis. In the first phase is the time to get acquainted with the data. The entire data should be reread to identify possible patterns. At this phase, the first impression of the patterns can be written down for further analysis. In the second phase, initial codes are generated from the entire data. In the third phase, the search for themes begins. Because the data contains different codes, in this phase, the idea is to identify possible candidate themes related to the coded data. The data can contain sub-themes or overlapping themes, but it is not intended to remove any codes or themes at this point. In the fourth phase it is time to refine and relocate the candidate themes to find connections between the coded data to support the research subject. The connections can be outlined with a thematic map. In the fifth phase, the final themes are defined and named. Each theme should be able to be described with a couple of sentences to make sure of the clearness of themes. In the last phase, findings are reported (pp. 5, 16-23).

3.2.6 The process of analyzing

All the interviews were recorded with the approval of the interviewees. After the interviews, I transcribed the data. My first thought was to analyze data by hand with a printed transcript and color markers to highlight candidate themes. However, to be more effective, I decided to use qualitative data analysis and research software ATLAS.ti.

Before coding, I reread the transcript a couple of times to refresh my memory. I started to analyze the data using the top-down approach, where the research question was used to identify relevant themes. There are different ways for coding, and in this study, the idea was to code sentences or paragraphs that were relevant for the research subject. I modified and created the codes manually during the process. This way of coding can be called open coding because there were no pre-set codes (Maguire & Delahunt, 2017). After the first round of coding, it was time to modify codes. At first, the data of Valio’s interviews consisted of 42 separate codes. However, there were similarities between the codes, and therefore after refinement, the data consisted of 12 codes. Codes were grouping together in the main themes, where the codes represented subthemes. Themes were created based on the research question, which led to finding relevant information from the data. Both coding and grouping phases were implemented with ATLAS.ti. software. An initial thematic map was used to visualize the created themes and sub-themes to identify the connections between them (see Figure 9). Finally, the data was reported, and the findings from the data are presented in the Interview findings chapter. Both companies, Valio and Foodwest, had the opportunity to proofread and comment the written findings. I have taken them into account in chapter 4.

All the data from interviews with Valio and Foodwest were analyzed the same way by using thematic analysis processes. I used two interview templates with Valio, but during the thematic analysis, I analyzed all the data together. However, findings from interviews with Valio and Foodwest are presented separately in the next chapter.

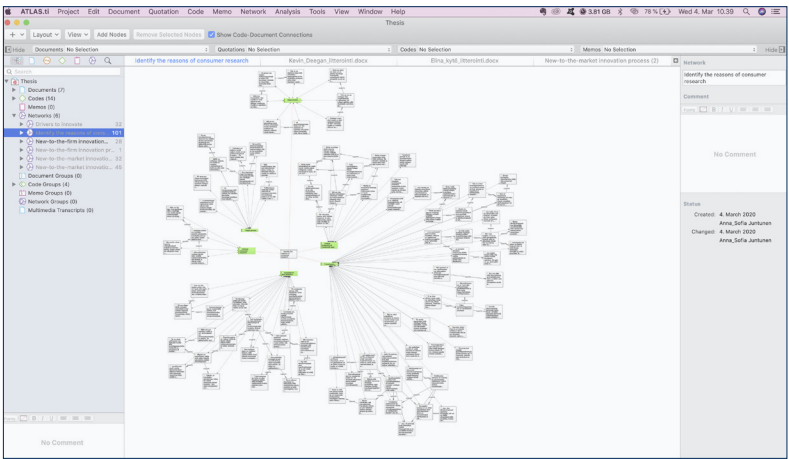


Figure 9. Screenshot of the created initial thematic map in ATLAS.ti software.

4. Interview findings

4. Interview findings

Interview findings are divided into three sections. Section 4.1 presents the findings of interviews with Valio and consists of the three subsections. Section 4.2 describes the findings of the interview with Foodwest, and it consists of two subsections. Section 4.3 discusses and cross-references the findings of Valio's and Foodwest's interviews. Figure 10 presents the subsections and themes that are introduced next in this chapter.

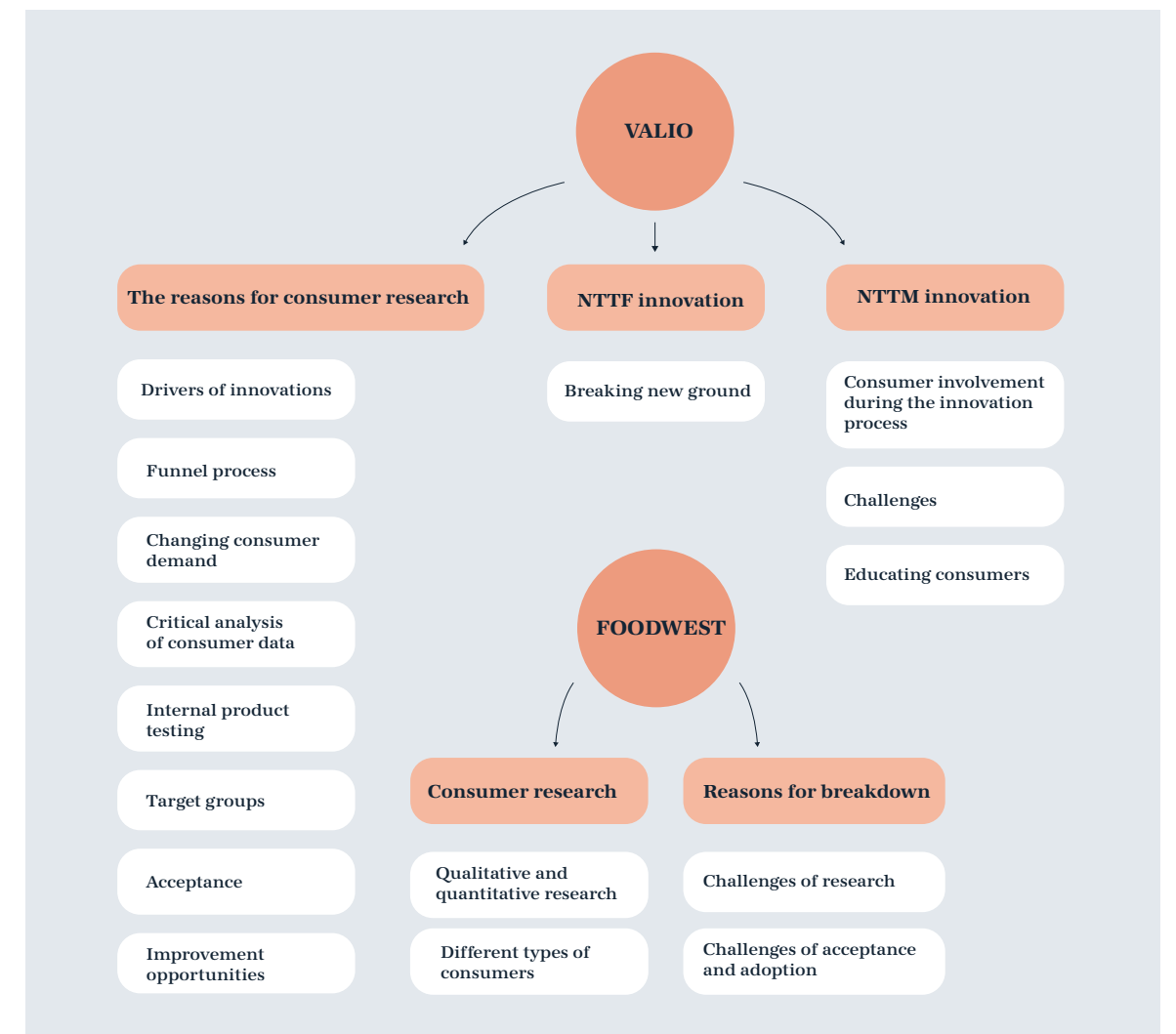


Figure 10. Findings from interviews with Valio and Foodwest. The figure presents subsections and themes.

The text contains quotations in italics that are excerpts from interviewees’ answers. Because the interviews were conducted in Finnish, the quotations have been translated into English for this study. Finnish versions of the quotations can be found in Appendices (see Appendix 2). NTTF is used in the text to describe the term “new to the firm”. Similarly, NTTM refers to the terms “new to the market” and NTTW refers “new to the world”.

4.1 The findings of Valio interviews

This section presents three subsections: The reasons for consumer research (4.1.1), NTTF innovation (4.1.2), and NTTM innovation (4.1.3). The findings are presented in chronological order following the innovation process and from a general to a more specific context. The word “team” has been used in the text to indicate the team that worked on the product in question.

4.1.1 The reasons for consumer research

This subsection introduces the findings that drive Valio to create innovations and how the innovation process passes through different filters before commercialization. In the interviews, it became clear that consumers are involved in different ways during the innovation process.

Drivers of innovations

Based on the interviews, two approaches affect the development of new product innovations at Valio: market pull and technology push. The market pull is about searching current and future trends and examining the competition. The technology push starts from inside the company when the new technology opportunity has been recognized or developed. However, the lack of consumer-driven innovation was also mentioned in the interviews, where the consumer could be a part of the innovation process in the role of innovator before the concept or product idea. The Senior Vice

President of Product Development said that Valio has had many hackathons with different stakeholders and university students, but that these could be organized with consumers as well. Overall, consumer involvement is seen as an essential part of the process particularly at the beginning. There is also a place for improvement in involving consumers at the earliest stage possible.

Funnel process

Before the interviews, I had an opportunity to read administrative documents from Valio to observe an overview their internal innovation process. With the supporting material, I was able to focus on discovering more details of Valio’s innovation process and the consumer’s role in it.

The innovation process at Valio was described as a funnel process when, in the beginning, there are many opportunities and ideas that are filtered when the process is moving forward. The filtering process is based on the gathered information, such as consumer research. Stage by stage, the topic of research becomes more tangible. Qualitative methods are used at the beginning of the process, and when moving forward through the process, the research is more quantitative. For example, researchers may first ask consumers about their opinions of dominant trends for the concept creation. In the final stages in the process, there is place for flavor and product testing. However, the Senior Research Scientist from the Research and Development department explained that because the responsibilities of consumer research are separated into two different groups at Valio, consumer insight and sensory evaluation, there might be some overlap with qualitative and quantitative research during the process. Consumer insight focuses on researching what consumers want and need by using qualitative and quantitative methods. Qualitative methods such as focus group interviews and in-depth interviews are used when insight for a concept or product development is needed. Quantitative methods, such as online surveys, can be used to gather insight from a large volume of consumers. Meanwhile, the sensory evaluation focuses on the product itself and measures the sensory responses of food products.

“ **Our main aim is to be the voice of the consumer in internal processes.** ”

- Head of Consumer Insight at Valio

Interviews confirm that the innovation process has iteration periods from start to finish, which is also discussed in the literature review chapter. The reasons for iterations are based on the results of consumer research and technology challenges. One of the examples mentioned in the interviews was that when the product is developed on a small scale in the laboratory, and it is time to scale up for piloting, it may present some technological challenges.

The interviews highlighted an external challenge that influences the planning of the internal innovation process. Retail stores have their specific time windows for accepting new products in the store, and companies have to take that into account when developing new products. Because the time window is open only three times a year, the companies have to decide on commercialization at least six months prior. When the decision of commercialization has been made, the product has to be ready enough to be introduced to the retail stores. As a consequence, the time window forces companies to launch products without final product testing. Therefore, the final proof of consumer acceptance might be available for analysis only after the product launch by using sales numbers and consumer feedback.

Changing consumer demand

When asked how the data that has been gathered from consumer involvement is used in the innovation process, a specific product family was mentioned, where a team created an online platform to collaborate with consumers. The product had been on the market for a while, but the sales started to decline. As a result, the product development process was decided to start again by involving consumers at the beginning of the process. The aim was to involve lead users to ideate and test the developed product. Usually, lead users can be recruited from forums where consumers are sharing advice. The involved group had an active role in the whole redevelopment process, and after the renewal of the product family, it turned out to be a real success. The product itself cannot be called an innovation, but it is an

excellent example of how consumer demand might change and affect the product's success. Consumer demand might also change during the innovation process because the product development and research can take many years. For that reason, the innovation should be re-evaluated with consumers before the product is launched to ensure product acceptance.

“ **We had an existing product, but it is easy to be blind to renew the product without the involvement of the consumer.** ”

- Category Manager at Valio

Critical analysis of consumer data

Gathering consumer insight at the beginning of the innovation process is a significant way to examine the reasons why people consume certain food products. However, qualitative consumer research needs critical analysis because consumers might not know what they might need in the next five years, especially if the innovation does not exist yet. Another challenge related to the critical analysis of data was also mentioned: consumers will not always tell the whole truth about their consumption. Therefore, all data should be analyzed with a critical point of view, and it is the researcher's responsibility to analyze the findings correctly. The Senior Vice President of Product Development at Valio quoted an example of innovation in the company's history where consumer research was implemented throughout the innovation process, but the product did not succeed as expected after it was launched. The reasons for the failure might have been the misconstruction of the findings or asking the wrong questions.

“ **No one will take the findings lying down.** ”

- Business Manager 2 at Valio

“
The biggest risks are asking the
wrong questions or making wrong
interpretations of the findings.”

- Senior Vice President of Product
Development at Valio

Internal product testing

The interviews revealed that part of the sensory evaluation testing could be executed internally with employees. Internal sensory testing is conducted when the team needs data related to product quality. It provides quicker test results and saves resources. However, when the team is developing a new product and looking to find out its potential, the research is executed externally.

Target groups

The Senior Vice President of Product Development explained that before a project kick-off, there has to be a preliminary idea of the target group, and it can be defined during the process. The target group is a hypothesis at the beginning, and the product should be tested with different target groups to identify how the product speaks to their needs.

When moving forward in the innovation process, the identified target group can be involved in consumer research. The Senior Research Scientist explained that when the target group is identified, their interest is considered also in package design and marketing.

“
When we are testing the concept with different
target groups, we can notice how interested the
different groups are in the concept, and after
launching, we can see who buys the product.”

- Category Manager at Valio

Acceptance

Sales were mentioned as an indicator of product acceptance. However, the quality of the product was highlighted as the most crucial matter which without the product cannot succeed. The Senior Research Scientist said that the proof of acceptance is tested in the innovation process with consumers. Therefore, sensory tests are running several times during the innovation process, and each time consumer data is measured and utilized for further development. The level of acceptance can be measured again with new tests. However, the final proof of acceptance is sometimes not able to get until after the product launch by sales figures because of the intensive time window of retail stores.

“
We will not launch new food products that
are not tested against the competitors.”

- Category Manager at Valio

Improvement opportunities

Two improvement opportunities related to consumer involvement were mentioned in the interviews. Firstly, sometimes the consumers are involved too late and the opportunities to influence the development are limited. The reason for involving consumers too late are the company's existing assumptions that they want to confirm at the end of the project. Secondly, the Senior Vice President of Product Development considered that they are already conducting a great deal of consumer research. However, the way consumers are involved could be considered further and analyzed whether the methods are suitable.

Another improvement opportunity that was mentioned is related to their internal process. The Head of Consumer Insight explained that they had had internal communication challenges between different departments. However, now they are improving the process of ongoing projects to reduce double research.

4.1.2 NTTF innovation

This subsection focuses on Valio’s innovation which is new from the company’s point of view. The subsection presents what is needed to create a product family that is breaking new ground and what challenges they faced during the innovation process.

Breaking new ground

Because the innovation at Valio was breaking new ground, they mentioned it needed qualitative research more than usual before the project kick-off. The Category Manager explained that when creating a new type of innovation (as a company point of view), the starting point is different. The company needed more time to acquire consumer insight because they lack previous experience from that field. When the company is developing an NTTF innovation, there are already similar products on the market. As a consequence, it is easier to examine consumer insight because consumers can rely on their past experiences than when creating NTTM or NTTW innovation.

“ It needs qualitative and consumer insight [...] because in those product categories where we are working, we already have so much insight and therefore it is easier to get to the point and speed up the research. ”

- Category Manager at Valio

The Head of Consumer Insight explained that they noticed the changes in the market that drove NTTF innovation. When the company was creating the innovation that was breaking new ground, it forced the project to be classified at first. The reason was that they did not want to affect the associations that the brand might have when they collaborated with consumers to gather necessary insight. They also wanted to ensure that the new brand would be suitable for Valio’s product family and would receive acceptance from their customers and owners.

4.1.3 NTTM innovation

This subsection focuses on what is needed to create NTTM innovation and how consumers should be involved during the innovation process. The subsection goes through the challenges that Valio faced when developing NTTM innovation, and what is needed to ensure the acceptance of any new type of food.

Consumer involvement during the innovation process

The Business Manager 2 said that consumers have more opportunities to impact the concept development when they are involved at the beginning of the process. The more innovative product the company is creating, the more research and consumer involvement is needed, especially at the beginning. The Senior Research Scientist explained that both NTTF and NTTM innovations are representing new know-how for the company. As a consequence, consumer involvement is significant in both cases because the company is starting to operate in a new field. However, it is more demanding to create innovation if there are no comparable products on the market. Because consumers can only consume a specific amount, the company has to determine what the new product could replace.

Technology opportunities inside the company drove NTTM innovation at Valio. After the technology discovery, the team executed qualitative research to determine the target groups and their motivations, challenges, and ambitions to consume. The selected target group was actively involved during the innovation process. The whole innovation process was a learning journey for the team because they were working within a new field. Every stage of the process was tested with the target groups to ensure that the direction was right for further development.

“ The whole time, we had a dialog with consumers to check their opinions. ”

- The Business Manager 1 at Valio

Challenges

A couple of challenges were identified related to NTTM innovation. The first one was identified after the product launch. Consumers did not find the product in grocery stores because it was a new product in a new category. As a result, the team collaborated with grocery stores and consumers to define the right place for the product. The other challenges were identified related to the product itself: ingredient, adoption, and usability challenges. The ingredient was familiar for consumers, but the product category was new, therefore consumers did not realize the correct usage of the product.

Educating consumers

The Business Manager 1 explained that when creating an innovation that consumers have not experienced yet, it is valuable to have something familiar in the product that support the adaption of the product. Because the usability was identified as a challenge, the team had to educate consumers on how to use the product.

“
[...] in the target group, there was an informative comment.
We had been talking about our concept idea for the last two hours,
and one participant said, ‘we have now been talking for the last
two hours about this, but I still do not understand what it is about.’
”
- Business Manager 1 at Valio

The Business Manager 1 continued that they decided to create recipes that were designed for the target group’s needs. The format of the product is also an essential aspect that promotes a sense of usage. With recipes, they were able to educate consumers to use the product and introduce how to replace the standard ingredients in familiar recipes with the new product. When the consumer has an opportunity to test the product, it can reduce the threshold of consuming because of possible prejudices of the new product. The Business Manager 2 said that food services and restaurants provide excellent channels to encourage consumers to test and buy the new product.

4.2 The findings of the interview with Foodwest

When the findings of interviews with Valio represented more specific subjects related to their internal innovation processes, the findings of the interview with Foodwest are providing a more comprehensive overview of implementing consumer research in food companies. This section presents two subsections: Consumer research (4.2.1) and Reasons for breakdown (4.2.2). The findings are presented in chronological order following the innovation process and the cause-effect relationship. The word “client” has been used in the text to indicate companies in the food industry that have collaborated together with Foodwest.

4.2.1 Consumer research

The subsection focuses on identifying the reasons for choosing qualitative and quantitative research methods. The findings highlight the importance of consumer involvement during the innovation process, and how to provide recommendations for a client for further development.

Qualitative and quantitative research

The Research Director from Consumer Insight and Market Research explained that when creating innovations, the process is more complex and more prolonged than with traditional food products. As a consequence, consumer research should be integrated at the beginning of the process to identify consumers’ needs and possible market areas for the new product. The importance of consumer involvement throughout the innovation process was underlined. The Market Research Manager said that some companies order consumer research when they already possess a product, while some companies contact Foodwest with only an idea. The chosen method is based on the needed information that the client is looking for.

“
There is no single stage where consumers should
become involved, but the entire innovation process
should be consumer-oriented.
”
- The Research Director at Foodwest

Foodwest’s online platform, “Omenakori” is used to involve consumers in a closed online community. With this platform, consumers can share their ideas and take part in the new product development process. When the online platform represents mainly qualitative research, product and sensory testing are representing quantitative research. The Research Director explained that when the client needs consumer feedback for the product itself, quantitative research methods are used to measure the acceptance of the product. The concept idea and the flavor of the product should be tested to confirm the acceptance. Quantitative research methods measure how many percent of participants in test groups have similar thoughts on the product that Foodwest can use to provide recommendations for a client.

“ [...] when research aims at representativeness, it always uses quantitative methods with several hundreds of consumers. ”
- The Research Director at Foodwest

Different types of consumers

Foodwest has a panel of consumers from which they can involve consumers in research. They explained that different projects require different types of consumers. For example, when looking to engage consumers in the very early stages of innovation process, like in ideation stage, more creative and broad-minded consumers are recruited. Sometimes they can also be heavy users of the category or loyal brand lovers who have a very strong passion for developing something new to the brand. However, it is generally beneficial to include different kinds of consumers to the sample to gain a wider understanding of the research topic.

4.2.2 Reasons for breakdown

This subsection focuses on recognizing the challenges of consumer research and other indicators that might influence the success and acceptance of the product.

Challenges of research

Two challenges were mentioned in the interviews that might affect consumer research and further development. Firstly, sometimes it can be difficult for the client to hear that their idea did not achieve consumer acceptance in a study. Consumer research results are critical despite them being what the client hoped for or not. However, consumer research is a useful way to minimize risks and do some further development before the product launch.

The second challenge is about finding out what consumers want to consume in the future. Clients are looking for answers for what is missing in the market and what consumers would want to consume next. These things cannot be asked straight from consumers, and therefore it needs resourcefulness in planning the right methods to execute the research. The problem is not that consumers would not answer the questions, but they might not be able to consider something that does not exist yet. As a consequence, wrong methods can lead to the failure of decision making. The Research Director added that qualitative research needs the expertise of executing the research and analyzing the findings. There can be a risk if the researcher is cutting corners with the findings and define recommendations based on that.

“ The basis of consumer research is understanding its limitedness: what things can be asked and in what way. ”
- The Research Director at Foodwest

Challenges of acceptance and adoption

The Research Director highlighted the importance of the product in the food industry. Sometimes consumers had been excited about the concept idea, and the research results supported the potential of it. However, when consumers had the chance to try the product, they were disappointed. The product itself is a critical aspect of succeeding, and therefore it would be crucial to test the product before the product launch. Even if consumer research is executed well and consumers have been involved during the innovation process, the risk of failure after the product launched exists.

The Market Research Manager explained that food legislation dictates what can be said about the product. The product might consist of beneficial and functional features that cannot be described on packages or in marketing. The legislation does not allow to explain all the features, and therefore the product might not succeed expectedly because the right message cannot be delivered to customers.

A lack of consumer liquidity might also lead to failure after the product launch. The Research Director gave an example of problems with consumer liquidity in the food industry. People might complain about the quality of ready meals, but when having better quality meals in grocery stores, the meals are not selling because of cheaper products next to them. Even if people would want certain things, they might not be willing to pay more to get it. The Research Director added that if the product is more expensive than the competitors’ products in the same food category, the risk of failure is high.

“ The price is definitely one of the most decisive factors. ”
- The Research Director at Foodwest

Four other challenges were mentioned that might lead to failure. Firstly, marketing can mislead the usage of the product or focusing on promoting unnecessary features of the product. Secondly, sometimes companies’ marketing activities are lacking or are limited in a way that the consumer might not become aware of the product at all. Thirdly, the competition on the market can change instantly after the product launch, and that might be a cause of failure. Fourthly, the retail stores decide the place of the product in a store, and therefore consumers may struggle to find the product.

4.3 Discussion of the findings from the interviews

Before Valio’s interviews, one participant said that Valio can be called a pioneer of consumer involvement in the food industry. The interviews confirm that they see the importance of consumer research, especially when developing innovations. Valio has a structured but flexible process for new product development. The process includes qualitative and quantitative research that is mainly executed by external consultants. The interviews confirm the same findings from the literature, which is that the innovation process is viewed as a funnel where the product idea becomes clearer at every stage. The findings also showed that the innovation process is a journey of learning, and that the research might lead to iteration cycles. Because of changing consumer demands, it would be beneficial to conduct consumer research at regular intervals to ensure the success of the company’s products on the market. As a result, the company’s innovation process should be flexible for agile learning also after the product launch.

Interviews with Valio focused on examining two product families that can be identified as NTTF and NTTM innovations. The findings showed that the innovations were technology and market driven. The NTTF innovation process started at opportunities noticed in changing markets, whereas internal technology development caused NTTM innovation. However, findings show that consumer-driven innovation was lacking, but interviewees also saw this as an opportunity for improvement.

Findings from interviews with Valio and Foodwest were consistent and without prominent contradictions. The findings underlined the importance of consumer involvement at the beginning of the innovation process. Qualitative research methods are used at the beginning of the process when there are more ideas and opportunities, and quantitative methods are more often used when there is an existing product and a need to measure its acceptance. In addition, quantitative methods can be also used diversely to gather data on the research subject from a large volume of participants during the innovation process, for example, when wanting to measure the interest of the concept. However, some improvement opportunities were mentioned related to consumer research. Interviews with Valio showed that consumers are sometimes involved too late into the innovation process when possibilities to influence the product development are limited. Meanwhile, findings from the interview with Foodwest showed challenges that the external consultants are facing. They mentioned that sometimes it is difficult for clients to realize that the product did not achieve the expected acceptance in consumer research, and consequently the development process might move forward in the wrong direction. Because companies are investing resources in innovations, they might not even want to believe that the product is not something that the consumers are looking for. To avoid futile investments and ensure the right path for development, consumers should be involved as soon as possible when starting to develop the innovation or even involved before the concept idea.

Consumer research takes time, and the company has to decide what research is needed. The findings from interviews proved that challenges the new product might face could be avoided with the final consumer test before the product launch. A couple examples that were mentioned in interviews showed how the product had not succeeded as expected. The reasons for this were found to be the limitations of qualitative and quantitative research. When developing innovation that does not exist yet, the consumers might not be able to express their future needs. As a consequence, the company or the external consultant should have the required expertise to choose the right methods for consumer involvement. The analysis of the results requires expertise in order to define the right decisions for further development.

The initial composition of the main target group should be made clear before the project kick-off, even if companies want to test the concept or the product with several groups. This enables focusing and executing the research with the specific group in mind. If the consumers are involved in the ideation stage, then different creative users as well as heavy users, lead users or loyal brand lovers should be favored in recruitment. Lead users are consumers who try to solve the problems by themselves, and therefore it depends on the product category where researchers can begin looking for lead users. The example presented above showed that in the food industry, the lead users could be found, for example, from forums that are linked to the hobbies or trends related to the product and where consumers share ideas.

The findings related to NTTF and NTTM innovations indicated that both represent novelty from the company's point of view. During both innovation processes, Valio was working on a new field, and consumer insight was needed more at the beginning of the process because they could not use research from previous projects. When creating NTTM innovation, consumers do not have any previous experiences that create challenges for consumer research, while in NTTF innovation, consumers can rely on their past experiences. The NTTM innovation that Valio created faced a couple of challenges that were related to the product itself, but the team resolved all the challenges. The solutions included, first, educating users to use the product and, second, food tasting in grocery stores and in restaurants to reduce the preconceptions with the food products.

Retail stores' time windows for accepting new products cause challenges for the innovation process. Because the time window is tight, the companies might not be able to test the final product with consumers before the product launch. However, the findings from interviews showed that it would be crucial to acquire final proof of the product before launch to avoid a possible failure.

The findings clarify that two aspects can be described as the most important ones without which the product cannot succeed: product quality and price. One of the interviewees explained that Valio will not launch new food products if they are not tested against the competitors, assuming there are competitors on the market. Moreover, the interview with Foodwest showed that the quality of the product should fulfill the promises of the concept and the expectations of the consumers. Furthermore, consumer liquidity should be tested because if the competitors' similar products in the same product category are cheaper than the launched product, then the risk of failure is higher. However, if the product is able to provide some other added value to the consumer, a higher price may be justified which the consumer might be willing to pay. The findings showed that sales numbers indicate the product's acceptance after the product launch, but before launch, acceptance can be measured during the innovation process with consumer research. Consumer research is a crucial factor during the funnel process without which the process cannot move forward. If the projected acceptance score is not reached in consumer research, then it is time for iteration.

5. **Conclusion and discussion**

5. Conclusion and discussion

As discussed in literature review increasing conscious consumption and competition on the market forces companies to develop food innovations. However, to advance the success of new products, companies need to ensure that products are accepted by consumers. Relevant literature and qualitative research with Valio and Foodwest were used to answer the research question “How does consumer involvement support the creation of food innovations and the acceptance of new products?” The study aims to identify the different approaches of consumer involvement because with the right approach, food companies can ensure the acceptance of their innovations and reduce the risk of failure after product launch. Figure 11 represents the key findings of this study.

Based on the findings, two main results answer the research question. The first one focuses on the first part of the research question and the second one on the acceptance of new products.

- 1

By involving consumers at the beginning of the process, the company can analyze consumers’ current and upcoming demands which they can then utilize in the concept development. When consumers are involved throughout the process, the company can benefit from external insight and knowledge which ensures the right direction for the process. However, the degree of innovation determines the approach of involvement to support the creation of innovation in the way it is needed.
- 2

Quantitative research can be utilized to measure the acceptance of the concept and the product throughout the process. It should be implemented after iterations to minimize risks of failure of further development. However, especially when creating innovation that is new to the market, consumer involvement might not alone ensure acceptance post product launch.

The following sections (5.1 & 5.2) present the main results in more detail and section 5.3 summarizes the results with visualization. Chapter 5 also introduces the recommendations for food companies to identify a favorable strategy of involvement, and implications for designers to recognize new opportunities in the food industry. The limitations of the study and suggestions for further research are discussed later in this chapter.

FINDINGS FROM THE LITERATURE	FINDINGS FROM BOTH SOURCES	FINDINGS FROM THE INTERVIEWS
To have positive impact in the innovation process, companies should identify different types of consumers.	Different types of consumers should be involved depends on the needs: typical users, inventive users or lead users.	At the beginning of the innovation process, inventive users or lead users should be involved.
Suspicious related to food innovations, food neophobia, and disgust.	It is easier for consumers to accept and adopt innovation when there is something familiar for them.	Companies should educate consumers to use the product and provide the opportunity to test it.
Three approaches to consumer involvement: Design for, Design with, and Design by.	Qualitative and quantitative methods are used for consumer research and involvement.	Consumer research should be analyzed critically, especially in qualitative research.
Sensory evaluation and psychological responses can be used to measure the acceptance of food.	Consumers should be involved during the innovation process to minimize the risks of failure.	The concept and the product should be tested to measure acceptance throughout the innovation process.
Innovation can be categorized into "new to the firm" (NTTF),"new to the market" (NTTM), and "new to the world" (NTTW) from the company's perspective.	Both NTTF and NTTM innovations represent novelty from the company's perspective.	
New Product Development (NPD) is the most common innovation process that food companies follow.	The innovation process can be described as a funnel process where the ideas are filtered for example based on consumer research.	Qualitative research is more used at the beginning of the process, and towards the end, the research becomes more quantitative.
The flavor is one of the most critical attribute that impacts people's eating choices. People also consume based on their values.		Product quality and price are one of the most important aspects of the product's success.
A conventional approach of innovation is based on the technical development, possibilities of machinery, or uses of underutilized ingredients.	Lack of consumer-driven food innovations.	Usually, innovations are technology- or market-driven.

Figure 11. The key findings from the literature and interviews to support this study. The middle section represents the findings that are discovered from both resources.

5.1 Results related to approaches to consumer involvement

In the literature review three approaches for consumer involvement were pointed out: *Design for*, *Design with*, and *Design by*. In short, consumers have a different role in each approach and contribute accordingly to the process. However, the findings from interviews suggest that the consumer role can change depending on the stage of the NPD (new product development) process. During the interviews, it became clear that Valio had used “Design for” and “Design with” approaches to involve consumers during their NTTF (new to the firm) and NTTM (new to the market) innovation processes. Both approaches have supported the process in different stages as needed. The results suggest that this combination will be suitable when creating NTTF innovation. However, this requires that consumers are involved from the outset of the process. Besides, Valio has used various co-creation tools to support the involvement, but consumers have not been in the role of innovator at the beginning of the process. It should be emphasized that the interviews with Valio focused mainly on two product families and, therefore, the findings are based on them. Because the interviews with Valio pointed out the lack of consumer-driven innovation, it supports the discovery that the “Design by” approach is not used in the company. However, Valio is currently going through internal strategic changes, which may also affect the way consumers will be involved in upcoming projects. Moreover, in the literature, there is a discussion about the lack of active role in consumers and how that could provide value when creating more radical innovations. Therefore, it can be proposed that consumers should be in the role of innovator in the process of NTTM innovation.

Because the research has been conducted by examining innovations that are novel from the companies’ point of view, two approaches can be suggested for involving consumers in the NPD process based on the findings: the Consumer-Centered approach and the Co-Creation approach (see Figure 12). The chosen approach depends on whether the product is NTTF or NTTM. The findings show that because both innovations are new from the company’s point of view, the need for consumer involvement is crucial already at the beginning of the process. However, the role of the consumers in the Consumer-Centered approach can be described as an external source of insight and feedback for the company, while consumers have a more active role as an innovator in the Co-Creation approach. The subsections 5.1.1 and 5.1.2 introduce the Consumer-Centered and Co-Creation approaches in more detail.

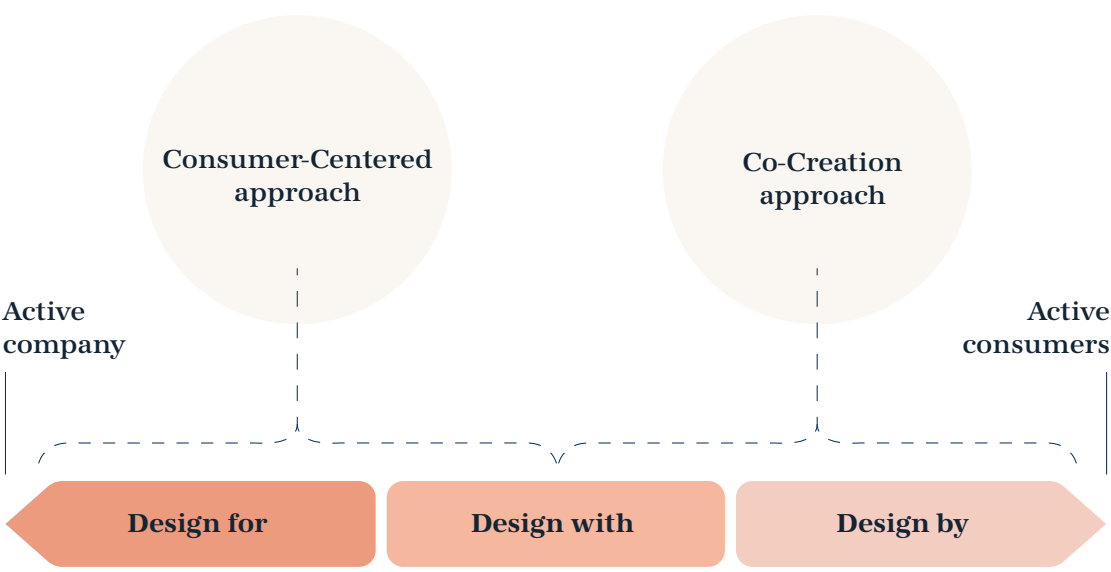


Figure 12. The Consumer-Centered and Co-Creation approaches can be suggested to involve consumers when creating food innovations. The appropriate approach is based on the degree of innovation from the company’s point of view.

5.1.1 Consumer-Centered approach to NTTF innovation

The Consumer-Centered approach can be seen as a combination of the “Design for” and “Design with” approaches where the consumers’ voice has been heard throughout the process by involving them in discussions and product testing. When a company is creating an innovation that requires new knowledge and expertise, they can use external help for development. Consumers can provide the needed resources and information for companies. In addition to that, the company can research a competitor’s products on the market to identify how to differentiate themselves in the competition.

Different types of consumers can be identified based on the findings from the literature and from the interviews: lead users, inventive users, loyal brand lovers, and two types of typical users. The degree of innovation determines what types of consumers should be involved. For example, the lead users solve the problems that the mainstream will face in the future while inventive users solve current challenges. Based on the findings, lead users might not be needed when creating NTTF innovation. Even if NTTF innovation can be a new to the company it might not be new to consumers, and therefore it would be tricky to motivate lead users to join the process to solve the current problem. However, during the NTTF innovation process, the company can involve inventive users and heavy users to discuss the chosen phenomenon in the focus group which can increase the new concept ideas during the fuzzy front-end phase. As inventive users are motivated to create solution for the existing problems, they can provide useful insight into development process as well. As findings from the literature define, heavy users, who belong to the typical user category, search more information than others about the product categories they use. Therefore, their insight is important to take into account because they might have a great deal of knowledge and experience about the existing products on the market. Typical users are the major group of consumers who can give feedback about the concept idea and the product during the development phase. Because they are representing the mainstream their acceptance should be ensured. Involving consumers at the beginning of the process can ensure the right direction for further development and acquire a positive influence on NTTF innovation.

5.1.2 Co-Creation approach to NTTM innovation

Because NTTM innovation is a novelty for the company and for the consumers as well, lead user’s involvement can be helpful for discovering unfulfilled consumers’ needs that the current products cannot offer. The findings show that online platforms can be used to invite lead users to innovate solutions and ideas together with the company throughout the process. Meanwhile, typical users can provide information about the possible preconceptions that the innovation might face after the product launch. When wanting to measure acceptance with quantitative research, typical users can be invited to the NPD process. However, typical users are not recommended to be in the role of innovator while creating NTTM innovation, as the findings disclose their limitations in generating ideas without having previous

experiences of similar products. In summary, the Co-Creation approach is a combination of the “Design with” and “Design by” approaches, where the concept idea and the product is designed together with lead users to be tested with various consumers to measure the acceptance.

Many food-related legislations, such as safety issues, must be taken into account when creating food innovations. Therefore, consumers who are involved in the NPD process, might not know all the aspects that they should consider. To provide the optimal environment for lead users to share their ideas, the company should offer transparency of the information flow between the company and participants. However, the company should steer the process to make sure that the direction is right based on the legislation, and their internal capability to produce the food is sufficient. Because retail stores have specific time windows for accepting new products, it requires the company to make sure they have enough time for final product testing with consumers. The company should also be in the role of facilitator to keep the motivation up through the Co-Creation approach.

Based on the findings of the interviews, consumer research needs resources, and therefore the company should decide when to outsource the research, and when to execute internally with employees. Because the findings show that there might be a risk of misanalysing the results of consumer research, the researcher needs the high-grade expertise to make the proper conclusions from the results. To avoid mistakes, it is not suggested that the company conducts the research by themselves, especially qualitative research. This suggestion can be disregarded if the company has the needed expertise. However, if the resources allow, the company can establish an internal research team to implement consumer research. The team could include a designer to ensure the use of needed methods and design tools to determine the consumers’ needs and desires and facilitate the chosen approach.

5.2 Results related to the acceptance of food innovations

At the beginning of the Consumer-Centered approach of creating NTTF innovation, the company can use focus groups and interviews to analyze consumers’ preferences and needs. The gathered insight might indicate the market opportunities. During the Co-Creation approach when creating NTTM innovation, lead users can share their ideas with the company in a platform that is supported by the company. Even if their needs do not represent mainstream, the findings show that their desires might become the norm for typical users later.

During the product development phase, the product idea becomes clearer when the process is moving forward. The NPD process can be called a funnel process, where consumer research can lead the company to choose the right direction for further development. Therefore, consumers should be involved after each iteration to measure acceptance. Overall, the matters that affect the acceptance and adoption of the product – flavor, product quality, and price – should be tested during the NPD process with consumers in both approaches.

All the preconceptions should be observed during the NPD process because they can reflect how the product will be accepted after launching. The findings indicate that when creating NTTM innovation, consumer involvement during the innovation process might not ensure the acceptance of the product alone. Therefore, the threshold to try and use the product should be lowered. The findings show that it is easier for consumers to accept new products when they have a familiar aspect to them, an ingredient or product format. Educating consumers with recipes for example can support the usage of the product. Because the flavor has been mentioned as one of the most significant matters that affect the acceptance, food tastings in grocery stores can reduce possible preconceptions related to the product and help with purchase decisions. Marketing can also be misleading or lacking which might affect the consumer acceptance. Furthermore, legislation dictates what can be said about the product and it might not be possible to express all the beneficial features in the package or in the marketing. This might prevent the desired success of the product.

Even if the product would succeed after launch, consumer demands and preferences may change over time. Therefore, acceptance should be tested also when the product is already on the market. The sales and other indicators can be used to identify who is buying and consuming the product. During the product family extension or other development phases, the company can invite these identified consumers to join concept and sensory testing.

5.3. Visualization for summarizing main results

The approaches for involvement are summarized in the following visualization (Figure 13). The idea was to use service blueprint, one of the design tools, as a source of inspiration to demonstrate the findings of consumer involvement during the innovation process. The visualization represents the role of consumers and the company during the different phases in the NPD process. It also presents the required research methods and other activities that the company should implement to achieve consumer acceptance. This visualization can be used as a tool inside the company to design the needed strategy for involving consumers.

	<div> <div>Before NPD process</div> <div>Fuzzy Front-End</div> <div>Product Development</div> <div>Commercialization</div> <div>After Product Launch</div> </div>				
Type of consumers that are suggested		Inventive users and heavy users	Inventive users / typical users	Typical users	Identified buyers
		Lead users	Lead users / typical users	Typical users	Identified buyers
Consumer's role during the process		Source of insight and feedback related on previous experiences	Source of insight and feedback related on previous experiences	Testing the ready product before launching	Concept and sensory testing if needed
		Ideate and develop the concept together with the company	Develop the product together with the company / test the concept and the product	Testing the ready product before launching	Concept and sensory testing if needed
Consumers' motivation to participate		Opportunity to impact the current problems.	Opportunity to impact the current problems.	Opportunity to impact the product before launch	Opportunity to share insight and feedback
		Opportunity to solve own problems together with like-minded participants	Opportunity to solve own problems together with like-minded participants	Opportunity to impact the product before launch	Opportunity to share insight and feedback
Active party	The company	The company	The company	The company	The company
	The company	Consumers in the company's supported platform	Consumers in the company's supported platform / The company	The company	The company
Research methods	Existing forums and other online platforms	Focus groups and interviews	Concept and sensory testing	Sensory testing	Concept and sensory testing
	Existing forums, other online platforms, well-designed surveys	Co-creation platform	Co-creation platform / Concept and sensory testing	Sensory testing	Concept and sensory testing
Company's role related to consumer involvement	Identifying and inviting inventive users and heavy users	Engaging inventive users and heavy users to participate to discuss the chosen topic	Engaging consumers to participate in the concept and sensory testing	Inviting various consumers to participate in sensory testing	Identifying who is buying the product to invite them in sensory testing if needed
	Identifying and inviting lead users	Engaging lead users to participate in co-creation platform as a role of innovator	Facilitating the co-creation approach and motivating lead users to engage	Inviting various consumers to participate in sensory testing	Identifying who is buying the product to invite them in sensory testing if needed
Ensuring the right direction for further development and acceptance of the innovation	Inviting the needed consumers to the NPD process.	Using focus groups and interviews to analyze the consumer's needs and preferences	Concept and sensory testing with various consumers to measure the acceptance	Sensory testing to measure the acceptance of the product to be launched	Analyzing sales and customer feedback. Marketing to make sure that consumers receive needed information about the product.
	Inviting the needed consumers to the NPD process.	Utilizing lead users' ideas to predict future needs and preferences	Utilizing lead users' ideas. Testing the ideas and products with various consumers to measure the acceptance.	Sensory testing to analyze possible suspicions. Sensory testing to measure the acceptance of the product to be launched.	Educating consumers to use the product. Offering food tastings to reduce prejudices. Marketing to make sure that consumers receive needed information about the product.

Consumer-Centered approach

Co-Creation approach

Figure 13. This visualization of the Consumer-Centered and Co-Creation approaches presents the consumers’ and the company’s role during the different phases of the NPD process and after the product launch. The word “company” has been used to represent the company or the external consultant who is conducting the consumer research.

5.4 Recommendations for involving consumers

This section represents the questions that the company can use internally to analyze their possibilities and needs for consumer involvement. The questions are proposed to use when the company has decided to create food innovation and is planning to integrate consumers into the process. However, the questions can also help to identify new opportunities, even if the innovation process has already started.

As mentioned in the literature, Berg et al. (2014) have suggested companies to internally discuss possibilities of consumer involvement based on their own capabilities and requirements. For that purpose, Berg et al. (2014, p. 88) define questions that can be used to recognize new opportunities for improvement of collaboration. I have used these questions as a guideline and inspiration to create the following internal questionnaire for food companies. Because the main results define two approaches of consumer involvement related to NTTF and NTTM innovations, the questions may have less relevance to the companies, who are making incremental changes to their products.

The thematized questions below can lead a conversation to identify the reasons and needs for consumer involvement and sub-questions can be used to go deeper into the subject.

What is the current situation?

At first, it is useful to consider what is the current situation in a company to analyze the needs for consumer involvement.

- Are we looking for new business opportunities?
- Are we already creating the innovation?
- In what phase of the innovation process are we currently?

What type of innovation are we creating?

The company should identify what type of innovation they are creating or are able to create because it affects the choice of the approach to consumer collaboration. Will the innovation possibly be new to them or new to the market? The following questions support to analyze the degree of innovation.

- Are there already similar products or innovations on the market?
- Do consumers have previous experience with related products?
- Is the innovation only new from the company's point of view?
- Do we already have the existing technology and market area that we are going to utilize?
- Are we eager to create radical innovation even if the risks are higher?
- Do we have an agile way of creating new products and changing the direction if it is required?

What kind of consumers should be involved?

After identifying the type of innovation the company is creating or willing to create, they can define what kind of consumers should be involved. These questions can show a place of improvement if the company has not considered different types of consumers before.

- Have we identified a target group?
- Is it possible to achieve the needed insight by involving only typical users?
- Where can we find inventive users for the beginning of the process?
- Do we need and can we identify lead users to co-create with us?

What are our resources for consumer research?

The company should consider the resources that can be used for consumer research. To avoid possible mistakes, the company should decide if they have the needed expertise to implement the research by themselves or whether they could use external consultants.

- What kind of internal knowledge and expertise do we have in order to implement consumer research by ourselves?
- Do we have the needed expertise to analyze the consumer data?
- Are we already using an external consultant to implement consumer research?
- Can we use the same consultant to implement new approaches for consumer involvement?
- How can we ensure consumer research throughout the innovation process?

What is our current approach to involving consumers?

Every company has their own way of involving consumers during the innovation process. However, companies should discuss if the current approach is appropriate for the next innovation. These questions can lead the company to consider the role of the consumer further to maximize the benefits.

- What has been the role of the consumer during our previous innovation processes?
- What is our motivation to involve consumers in the innovation process?
- What are the areas for improvement in consumer research?
- How can we motivate consumers to engage in our innovation process?
- Are we ready for radical changes during the development phase based on the findings of consumer research?

With the questions above, the company can identify what their resources and capabilities are to create food innovations. To achieve the most out of consumer involvement, the company should identify if the innovation is new to the market or only new to them. Once the company has identified their possibilities, they can design a strategic plan to involve consumers during the process. With the right strategy, the company can support the creation and acceptance of food innovations.

5.5 Implications for designers and design agencies

Because the recommendations are created for food companies, this subsection addresses the implications for designers and design agencies of the study. This study examined and analyzed the different approaches of consumer involvement in food companies which is also useful background research for designers who collaborate with consumers.

Even if this study did not highlight the role of designers during the innovation process, service design is used for solving problems by collaborating with users utilizing a variety of design methods and tools. In the service design process, users are the core whose needs should be met. The increasing trend is designing food together with consumers, as was mentioned in the K-Group's trend review 2020 (K-Group report, n.d.), and therefore it could predict growing demand for service designers in the process of creating food innovations. Because the innovation process needs flexibility, service designers are able to manage the process creatively by using different design methods and facilitate different approaches to creation.

In short, I hope this study brings up new possibilities for designers and design agencies to work together with food companies as internal team members or external consultants.

5.6 The limitations of the study

The research interviews were conducted only with one food company, Valio, which is a large company in Finland. Consequently, the study does not discuss how small and medium-sized food companies or food startups involve consumers throughout the innovation process. The research results might change if more food companies were involved in this study. Interview with Foodwest provided a comprehensive picture of how food companies in Finland utilize consumer research, but the findings do not differentiate according to companies’ sizes. Therefore, the conclusion of the study cannot be used to generalize how consumers are involved throughout the food industry and how all companies could benefit from the proposed approaches. However, the proposed recommendations for the internal conversation to design the company’s own strategy for consumer involvement can be used to explore possibilities of improvement.

5.7 Suggestions for further research

Five suggestions for further research have been identified. Firstly, further research might begin by verifying and validating the above conclusions. By interviewing companies who have adopted the above approaches, the findings could provide concrete suggestions to refine the approaches. Secondly, the role of consumers has been seen as an essential part of the creation of food innovations and achieving the desired results of consumer acceptance. Therefore, more in-depth research and mapping of different participatory design approaches and collaborative practices would support the design of different strategies for consumer involvement.

Thirdly, it should be emphasized that this study focused on how adult consumers accept new products and therefore it raises the question of what is affecting children’s acceptance. Children do not choose the food that they are willing to eat based on the values or the price of the food. Even if the parents make the decision on behalf of children, children usually make the last decision of eating the food. As in the literature has been discussed, food neophobia and disgust should be considered when creating food innovations. Especially children might have strong aversion for certain food products. Therefore, it would be interesting to study

different contributing factors which affect the children’s acceptance and examine how children could join testing or even develop the food products. This would increase the possibility to create food products that are accepted by the whole family.

Fourthly, the findings from the literature showed categorization for innovation based on the degree of the novelty from the company’s perspective. The qualitative research was implemented by focusing on two categories, NTTF and NTTM innovations. Therefore, I did not focus in-depth on how consumers are involved when companies are creating incremental innovations. Examining how consumers could be involved when making incremental changes for the products, could provide a comprehensive strategic plan for companies when creating all kinds of food innovations to ensure successful products.

Fifthly, this study provides useful insight into consumer involvement possibilities for food companies but limits the generalizability to all industries. Nevertheless, other industries may find these approaches useful and might be interested in further research.

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Appendices

Appendix 1
Interview Template 1

X indicates the NTTF or NTTM innovations.

Background question

- 1. Would you tell a little bit about your background and role at Valio?

Innovation process

- 2. How did X begin?
- 3. Did the innovation process of X follow the typical innovation process at Valio?
 - Is the development process of new products different comparing other products?
- 4. From your own viewpoint, how important are consumer involvement in different phases in the innovation process?
- 5. What stage of the X's innovation process, consumers were involved and in what way?
 - Are consumers involved differently when creating new type of products?
- 6. How are consumers recruited into the innovation process?
 - What kind of consumers are recruited primarily?
- 7. Did you outsource consumer research during the X's innovation process?
 - At what stage in the process consumer research were outsourced?
 - What kind of consumer research did you outsource?

Involving consumers

- 8. Can you give an example, how the data that has been gathered from consumer involvement are used in the innovation process?
- 9. How do you measure the output and value of consumer research?
- 10. Do you think, that consumer involvement caused some challenges during the X's innovation process?
- 11. What are the most challenging things to find out through consumer involvement?
- 12. Is there anything that could be done differently during the X's innovation process?

Acceptance of new food products

- 13. How have consumers accepted X after the product launch?
 - How did it come up to your expectations?
- 14. What do you think have influenced the acceptance of X?
 - How have you measured the acceptance of X?
- 15. How has the product development process continued after the first product launch?
 - Have consumers been involveded after the product launch?

Wrap up

- 16. Is there anything you would like to add or tell, that this interview did not go through?

Appendix 1
Interview Template 2

Background question

- 1. Would you tell a little bit about your background and role at Valio?

Food innovations

- 2. What are the reasons to start developing new food innovations at Valio?
- 3. From your own viewpoint, what things are affecting the success of the innovations?

Involving consumers

- 4. What are the reasons to involve consumers in the innovation process at Valio?
- 5. From your own viewpoint, how important are consumer involvement in different phases in the innovation process?
- 6. How are consumers involved during the innovation process?
 - What are the benefits and challenges of each used method and tools?
- 7. Via Valio webpage, consumers can leave, for example, their product development ideas.
- 8. How actively has this platform been used?
 - How are used the data that has collected from this platform?
- 9. How do you analyze have consumer involvement been useful for you?
 - What kind of usefulness are you wishing to gain from consumer involvement?
- 10. What are the most challenging things to find out through consumer involvement?
- 11. How are consumers recruited into the innovation process?
 - What kind of consumers are recruited primarily?
- 12. Have you used any method that was not able to gather useful data from consumer involvement?
- 13. What kind of challenges has been followed by consumer involvement during the innovation process, or might be followed?
- 14. Can you give an example, how the data that has been gathered from consumer involvement are used in the innovation process?
- 15. Can you describe what has been the most significant learning from consumer involvement?

Acceptance of new food products

- 16. How do you research what kind of food consumers are willing to consume?
- 17. In what way can you ensure consumer acceptance of food innovations?
- 18. How do you research are consumers accepting food innovations?

Wrap up

- 19. Is there anything you would like to add or tell, that this interview did not go through?

Appendix 1

Interview Template 3

Background question

- 1. Would you tell a little bit about your background and role at Valio?

Innovation process

- 2. At what stage of innovation process do companies order consumer research from you?
- 3. From your own viewpoint, how important are consumer involvement in different phases in the innovation process?
 - What are the benefits and challenges of each used method and tools?
- 4. What challenges might consumer research cause for the product innovation process?

Involving consumers

- 5. How might consumer research on product innovations differ from consumer research on other products?
- 6. What are the most challenging things to find out through consumer involvement?
- 7. Have you used any method that was not able to gather useful data from consumer involvement?
- 8. How do you measure the output and value of consumer research?
- 9. How the data that has been gathered from consumer involvement can be used in the innovation process?
- 10. Can you describe what has been the most significant learning from consumer involvement?

Acceptance of new food products

- 11. In what way do you think that could be gained the consumer acceptance of food innovations?
 - Do you think that consumer research could be used to advance the acceptance of product innovations?
- 12. How do you research and measure the acceptance of product innovations?
- 13. How do you research what kind of food consumers are willing to consume?
- 14. From your own viewpoint, what things are affecting the success of the innovations?

Wrap up

- 15. Is there anything you would like to add or tell, that this interview did not go through?

Appendix 2

The quotations of interviews

“Meidän päätarkoitus on olla kuluttajan ääni sisäisissä prosesseissa.”

(Our main aim is to be the voice of the consumer in internal processes.)

- Head of Consumer Insight at Valio

“Meillä oli olemassa oleva tuote, mutta on helposti sokea uudistaa sitä osallistamatta kuluttajaa siihen.”

(We had an existing product, but it is easy to be blind to renew the product without the involvement of the consumer.)

- Category Manager at Valio

“Eihän kukaan purematta niele niitä tuloksia.”

(No one will take the findings lying down.)

- Business Manager 2 at Valio

“Suurin vaara piilee siinä et kysytään vääriä asioita tai tehdään vääriä tulkintoja niistä tutkimuksista.”

(The biggest risks are asking the wrong questions or making wrong interpretations of the findings.)

- Senior Vice President of Product Development at Valio

“Kun testataan jotain konseptia eri kohderyhmillä niin nähdään kuinka kiinnostuneita eri kohderyhmät on ja sit kun tuote on markkinoilla niin sitten me pystytään nähdä ketä sitä ostaa.”

(When we are testing the concept with different target groups, we can notice how interested the different groups are in the concept, and after launching, we can see who buys the product.)

- Category Manager at Valio

“Me ei päästetä uusia ruokatuotteita markkinoille, ellei niitä ole testattu suhteessa kilpailijoihin.”

(We will not launch new food products that are not tested against the competitors.)

- Category Manager at Valio

“Se tarvii sitä kvalia ja kuluttajien ymmärrystä [...] koska niissä tuoteryhmissä missä me ollaan mukana, niin on niin paljon jo insightia jo olemassa ja on jo helpompaa päästä ytimeen ja lähteä tutkimaan nopeammin.”

(It needs qualitative and consumer insight [...] because in those product categories where we are working, we already have so much insight and therefore it is easier to get to the point and speed up the research.)

- Category Manager at Valio

Appendix 2

The quotations of interviews

“Koko ajan käytiin dialogia sen kuluttajan kanssa ja tarkistettiin koko ajan et mites tää.”

(The whole time, we had a dialog with consumers to check their opinions.)
- The Business Manager 1 at Valio

“[...] fokusryhmässä oli valaiseva kommentti. Me oltiin kerrottu millainen se meidän konsepti on ja puhuttu kaksi tuntia, niin se ihminen sano, ”et me ollaan puhuttu nyt kaks tuntia tästä asiasta, mut mä en silti ymmärrä mistä me puhutaan.”

([...] in the target group, there was an informative comment. We had been talking about our concept idea for the last two hours, and one participant said, ‘we have now been talking for the last two hours about this, but I still do not understand what it is about.’)
- Business Manager 1 at Valio

“Ei oo mitään yksittäistä vaihetta, milloin kuluttajaa kannattaisi osallistaa vaan innovaatioprosessin pitäisi olla kuluttajalähtöinen.”

(There is no single stage where consumers should become involved, but the entire innovation process should be consumer-oriented.)
- The Research Director at Foodwest

“[...]aina kun haetaan edustavuutta, niin käytetään kvantimenetelmiä eli useita satoja kuluttajia.”

([...] when research aims at representativeness, it always uses quantitative methods with several hundreds of consumers.)
- The Research Director at Foodwest

“Kuluttajatutkimuksen perusta on sen rajallisuuden tunnistaminen: mitä asioita voi kysyä ja millä tavalla.”

(The basis of consumer research is understanding its limitedness: what things can be asked and in what way.)
- Research Director at Foodwest

“Hinta on ehdottomasti yksi eniten ohjaavia tekijöitä.”

(The price is definitely one of the most decisive factors.)
- Research Director at Foodwest